

Review of the Regulatory Treatment of Inflation

Response to AER Draft Position

6 November 2020

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1 Executive summary

Energy Networks Australia (ENA) welcomes the opportunity to provide this submission to the Australian Energy Regulator's (AER) review of the regulatory treatment of inflation. In its Draft Position Paper the AER has sought comment and input on several issues. This response sets out our views on those areas and also raises some additional issues.

ENA has raised the need for an urgent change in the inflation estimation approach for several years. ENA recognises that the AER's Draft Position contains a significant move towards bringing regulatory inflation estimates toward the best estimate of future inflation. An unbiased estimate of future inflation is required to allow the regime to deliver, in expectation, the efficient nominal rate of return estimated by the AER.

The current approach to estimating inflation is not fit to be applied in current low return, low inflation economic conditions which have persisted for some time and which are exacerbated by the economic impacts of COVID 19.

Network investors across the National Electricity Market have lost \$3.7 billion over the last 5 years, and \$4.5 billion over the last 10 years, as they have had to make up the shortfall between the AER's estimate of the efficient cost of debt and the return that has actually been delivered by the regulatory framework, due to the mismatch between the AER's estimate and outturn inflation.

Seeking to address this mismatch in a way that promoted positive long-term outcomes for customers without resulting in higher or more volatile prices was a key factor in ENA's support of incorporating a hybrid approach as outlined in our previous submission. ENA continues to see merit in the hybrid approach and considers that it has a number of advantages for consumers.

The current approach delivers inflation estimates that are not supported by any evidence and its recent application has led to extreme outcomes in the AER's decisions, including:

- Negative net profit after tax (NPAT) of over \$500 million for the Queensland distribution networks; and
- For investors with inflation expectations in line with market data, expected nominal returns on equity of 2%.

In the absence of significant, and immediate, change, these extreme outcomes will lead to concerning outcomes for customers.

Customers' long-term interests are promoted when investors expect the efficient nominal rate of return set by the AER to be delivered by the regulatory framework. This is the rate required to ensure a network has an incentive to undertake efficient investment and is able to attract the required investment capital. It follows that if investors expect to receive a lower rate of return than that estimated by the AER to be efficient, then networks do not have an adequate incentive to undertake efficient

investment. This could lead to inefficient project deferrals or discourage investment in projects required to unlock broader benefits for customers, including those included in the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP).

For this reason, ENA considers that immediate changes – such as those included in the AER's Draft Position Paper – are in the long-term interests of customers.

ENA also note that the regulatory framework, including key parameters such as the rate of return and expected inflation, was originally designed to deliver outcomes that promote the long-term interests of consumers. The rationale for the need for the efficient cost of capital to be delivered to ensure the long-term interests of consumers are met is set out in detail in Section 3 of this submission.

We note that the AER's Consumer Reference Group has expressed a concern that 'a change **now** will benefit networks'¹ and that such a change will result in the delivery of windfall profits. ENA notes that:

- It is not in the long-term interests of consumers for prices to be lower than the levels that allow an unbiased expectation that the efficient rate of return will be delivered. This was established at the initiation of the regulatory framework; and
- Networks are not seeking excess profits through this review process. They are seeking the rate of return already deemed efficient by the AER to be delivered. Investors across the National Electricity Market (NEM) have lost \$3.7 billion over the last 5 years as a result of a mismatch between expected and outturn inflation. Networks are not seeking to recoup any of this under-recovery, but are highlighting the fact that the regulatory regime has been delivering less than the AER's estimate of the efficient cost of capital. Given the decline in economic conditions, the continued application of the current estimation approach would be expected to lead to an even greater loss over the next 5 years, with no reasonable prospect of this being recouped in future years to deliver a NPV=0 outcome.

A summary of other parts of our submission are set out below.

The new approach should be implemented immediately

ENA notes that the Draft Position Paper concludes that the 5-year glide-path approach:

- » Is superior to the old approach;
- » Produces the best estimate of expected inflation; and
- » Best promotes the National Electricity Objective (NEO) and National Gas Objective (NGO).

¹ Regulatory Treatment of Inflationary Expectations, Consumer Reference Group, AER Public Forum, 21 October 2020

ENA considers that, having reached that conclusion, the new approach should be implemented immediately.

ENA supports the targeting of a 5-year term for regulatory inflation

ENA notes that the AER seeks to set the regulatory inflation parameter so that the deduction from allowed revenues in the Post Tax Revenue Model (PTRM) is equal to the expected value of Regulatory Asset Base (RAB) indexation in the Roll Forward Model (RFM). ENA refers to this as the ‘take out what you expect to put back in’ framework.

Under this framework, 5-year inflation is ‘put back in,’ so 5-year inflation must be ‘taken out.’ That is, the term of the inflation parameter is determined by the RFM and not the Rate of Return Instrument (RoRI) or any other rate of return parameter.

For these reasons, ENA supports the adoption of a 5-year term.

ENA supports the additional weight applied to current market data under the 5-year glide-path, but remains concerned about an upward bias in RBA Year 2 forecasts

ENA supports the reduction in the weight applied to the 2.5% mid-point of the policy target range under the 5-year glide-path.

However, ENA remains concerned about an upward bias in the (pivotal) RBA forecast for Year 2. The RBA has consistently over-forecast Year 2 inflation over the last decade. The inflation swaps approach has produced more accurate forecasts of outturn inflation in the current environment of persistent low inflation.

The assessment of biases in the Final Position Paper

ENA raises three key points in relation to the assessment of potential biases:

- » It is important that the Final Position Paper contains a full analysis of all biases, including potential biases in the RBA’s forecasts.
- » A full assessment of biases would consider how various approaches perform in the prevailing market conditions, not just on average over a range of market conditions.
- » When considering biases, the appropriate benchmark or test is the extent to which an approach is able to forecast actual inflation outcomes. Under the ‘take out what you expect to put back’ framework, the goal is to produce the best possible forecast of what is expected to put back. Since it is actual inflation outcomes that will be ‘put back,’ the goal is to produce the best possible forecast of actual inflation at the time of each determination.

There is no rationale for any delay or transition

Since the AER considers that the new approach produces the best estimate that best promotes the NEO and NGO, it should be implemented immediately. Further, the AER is required under the NER and NGR to use the best estimate available of expected

inflation. No extraneous objective overrides the NEO and NGO, so there should be no delay to adoption of the approach that best promote the NEO and NGO.

The new approach is a parameter change and not a framework change:

- » The new approach involves no more than changing the weights applied to the same three pieces of evidence – the RBA 1-year and 2-year forecasts and the 2.5% mid-point figure;
- » The new approach makes no assumptions about any change in the way a benchmark efficient firm would be operated;
- » The new approach requires no change at all to any regulatory model – it involves inserting a different figure into the ‘expected inflation’ cell; and
- » The inflation slate is wiped clean at the end of every regulatory period so there is no sense in which a 10-year estimate must or should be left to ‘run its course.’

Moreover, the suggested triggers for delay or transition are inevitably arbitrary and uncertain:

- » Waiting until the new approach produces an estimate close to 2.5% would amount to identifying a (mismatch) problem with the current regulatory approach, developing a new approach to address that problem, and waiting until the problem has resolved itself before implementing the corrected approach; and
- » There is no rationale for delaying the decision about regulatory inflation until the 2022 RoRI review because the inflation term is determined by the RFM and not the RoRI.

Advantages of hybrid approach and request for clarification of the AER’s analysis of the proposed hybrid approach

ENA continues to see merit in the hybrid approach and considers that it has a number of advantages for consumers. The most important of these is that it ensures that all consumers pay the efficient cost of the service that is provided to them.

ENA considers that there are a number of features of the hybrid approach that might be attractive to consumers, including:

- » The hybrid approach has zero impact on prices over the first regulatory period. This is because the only impact of that approach is a potential change to the rate at which the RAB is indexed at the end of the period.
- » The hybrid approach has no impact on long-term average prices or the volatility of prices. This was demonstrated via the simulation modelling submitted with ENA’s July 2020 submission.

A key rationale for ENA’s proposed hybrid approach is that it matches the regulatory allowance with the cost of what the AER considers to be the efficient financing practice.

ENA considers that stakeholders would benefit from a better understanding of the AER’s reasoning in relation to the proposed hybrid approach. ENA encourages the

AER to provide, in its Final Position Paper, some discussion to clarify a number of issues set out in Section 6.4 of this submission.

Emerging financeability pressures and negative profit allowances

ENA, member firms, and the AER's advisers have raised concerns about the fact that recent regulatory decisions produce negative net profit after tax in every year of the regulatory period.

This is a new development in the Australian regulatory setting, with the problem first arising in the NSW distribution network decisions in 2019. The problem has persisted in all subsequent decisions and continues to apply to the Victorian distribution draft decisions, even after the AER's proposed modification to its approach for estimating expected inflation.

The negative net profit allowance is a real and important issue for network businesses. Negative net profits affect credit rating metrics, ratios used in debt covenants, and have real effects on the ability to attract capital. These issues have the potential for materially harmful flow on impacts for current and future customers if left unaddressed.

Since this issue has not been fully addressed as part of the regulatory inflation process, ENA is keen for early and full engagement on this very important issue as part of the financeability work signalled in the Pathways to 2022 Position Paper.

2 Summary of the rationale for the AER's proposed new approach

Summary

- » The Draft Position Paper sets out the rationale for the AER's proposed new approach. At a high level, the AER has proposed a new approach because it considers that the new approach:
 - Produces the best estimate of expected inflation.
 - Best promotes the NEO and NGO.
 - Is superior to its current approach.
- » A 5-year term has been adopted to ensure that ex ante expected returns are correct:
 - A 5-year term ensures that what is 'taken out' of allowed returns in the PTRM is equal to what the AER expects to 'put back' via indexation of the RAB in the RFM.
 - The term for inflation is determined by the RFM not the RoRI.
- » A glide path has been adopted to relax the very strong assumption that inflation is always expected to immediately return to 2.5% after Year 2:
 - The glide-path approach recognises that, during periods of sustained high or low inflation, it may take longer for inflation to revert back to 2.5%.
 - The prevailing market conditions are such a period.

Section 13 of the Draft Position Paper summarises the AER's proposed new approach to estimating expected inflation and sets out the rationale for that approach. This section summarises the AER's rationale for the proposed new approach, which provides some important context for the remainder of this response.

2.1 The AER considers that its proposed approach will produce the best estimate of expected inflation

The Draft Position Paper states that the AER considers that its proposed new approach produces the best estimate of expected inflation:

*We consider that the method that is likely to result in the **best estimates of expected inflation** is to employ both a shorter target inflation term (by matching the length of a regulatory period) and a glide-path over five years. Albeit that these two positions have been reached sequentially and on different basis.²*

² Draft Position Paper, p. 62, emphasis added.

and:

*We consider this method is likely to result in the **best estimate of expected inflation**.*³

and also:

*To be clear we consider an estimate of inflation expectations with a glide-path over five years plus a term matching the length of the regulatory period is likely to result in **the best estimate of expected inflation** over the regulatory period.*⁴

2.2 The AER considers that its proposed approach best promotes the NEO and NGO

In its Draft Position Paper, the AER states that it considers that the proposed new approach will best promote the National Electricity Objective (NEO) and National Gas Objective (NGO):

*Our draft position is that, a term that matches the length of the regulatory period together with a glide-path as outlined above, will provide a method likely to result in the best estimate of expected inflation, and therefore **achieves the NEO/NGO to the greatest degree**.*⁵

and also:

*For the reasons set out above and having considered all stakeholder submissions, we consider that our draft position is likely to result in the best inflation estimates and is likely to **contribute to the achievement of the NEO and NGO to the greatest degree**.*⁶

2.3 The new approach is superior to the old approach

The Draft Position Paper states that the AER considers that the proposed new approach is superior to the AER's current approach to estimating expected inflation:

*Our draft position is that there is likely to be **a better approach** to estimating expected inflation than the one we currently use. This better approach is likely to incorporate a glide-path and a term profile that matches our escalation of the RAB.*⁷

³ Draft Position Paper, p. 7, emphasis added.

⁴ Draft Position Paper, p. 62, emphasis added.

⁵ Draft Position Paper, p. 62, emphasis added.

⁶ Draft Position Paper, p. 83, emphasis added.

⁷ Draft Position Paper, p. 87, emphasis added.

2.4 A 5-year term ensures ex ante expected returns are correct

The 5-year term is adopted to match the expected benefit of RAB indexation

The Draft Position Paper is clear that a 5-year inflation estimate best promotes the NEO and NGO:

On balance, we consider that an inflation term tied to the length of the regulatory period is likely to achieve the NEO/NGO to the greatest degree.⁸

The 5-year term was selected to ensure a match between the deduction to allowed revenues in the PTRM and the expected benefit of RAB indexation in the RFM:

*We consider that using a term that matches the regulatory period will ex-ante match expected inflation over the regulatory period, and that this is a better approach than matching the 10 year term of the rate of return. This ensures that **in expectation, the nominal rate of return and real rate of return is achieved over the regulatory period.**⁹*

The Draft Position Paper explains this rationale in more detail as follows:

*Having regard to the advice from Dr Lally and submissions on our discussion paper, we have reached the view that an inflation term matching the regulatory period is likely to result in the best estimates of expected inflation. In particular, we consider that adopting an inflation term that is the same length as the relevant regulatory period (typically, 5 years) would, in expectation match RAB indexation over the regulatory period. This is desirable because **service providers will in expectation receive the same allowance during RAB indexation in the RFM as the amount (expected inflation) deducted from total revenue in the PTRM.** Thus, service providers are expected to receive the nominal return set in the rate of return instrument over the regulatory period.¹⁰*

In summary, the 5-year term is selected to match the indexation for inflation that occurs in the RFM. Because the RFM adds back 5-year inflation, the PTRM must also deduct 5-year inflation.

Position on term of estimate is driven by the Roll Forward Model – it is not a RoRI issue

The Draft Position Paper is clear about the fact that the objective is to estimate the expected benefit of RAB indexation in the RFM. Thus, what is required is an estimate of the extent to which inflation will flow through the RFM and into the RAB.

⁸ Draft Position Paper, p. 46.

⁹ Draft Position Paper, p. 62, emphasis added.

¹⁰ Draft Position Paper, p. 48, emphasis added.

This is entirely different from an estimate of the extent to which the risk-free rate or the allowed return on debt might be affected by expected inflation.

That is, under the framework set out in the Draft Position Paper, what is required is an estimate of how 5-year inflation will flow through the RFM. The extent to which one or more rate of return parameters may embed inflation expectations is irrelevant to that exercise.

In summary, the Draft Position Paper concludes that the term required for the inflation estimate is determined by the RFM and not the RoRI. Consistent with that conclusion, the AER observes that:

At this time, it is not clear to us that the term for the inflation expectations needs to be aligned to that used for the determination of the rate of return.¹¹

2.5 Rationale for glide-path approach

Relaxes the strong assumption that expected inflation always returns to 2.5% after two years

The AER's current approach to inflation is based on the assumption that expected inflation always immediately returns to 2.5% after two years. This is a very strong assumption in market conditions where inflation has been persistently and materially outside the RBA target band – as is the case in the current market conditions. The glide-path approach provides a slight relaxation of that assumption in relation to the inflation estimates for years 3 and 4.

The Draft Position Paper sets out the rationale for the glide-path in terms of the longer time that might be taken for inflation to return to 2.5% after some sort of market disturbance – being a period of sustained inflation outside the RBA target band:

The glide-path approach is a modified version of our current approach, and is based on the proposition that it may take a number of years for inflation to return to the mid-point of the RBA's target band following a disturbance. The use of a glide-path approach in the current inflationary environment is supported by both Deloitte and Dr Lally's reports. Deloitte found the glide-path approach to be 'simple, easily replicated and potentially more congruent with long-term inflation expectations of market participants' provided that the glide-path is clearly defined by the regulator'. Similarly, Dr Lally noted that a glide-path approach is appropriate 'because reversion back to the RBA's target is currently expected to be unusually slow'.¹²

The Draft Position Paper notes that the glide-path approach is expected to be superior to the current approach during periods of sustained high or low inflation:

¹¹ Draft Position Paper, p. 48.

¹² Draft Position Paper, p. 57.

*The glide-path approach is flexible and adaptable to market uncertainty and different economic environments. **Relative to our current approach, we expect it will perform better during periods of sustained high or low inflation** when the short-term estimates remain substantially different from the mid-point of the target band.*¹³

and:

*We are also persuaded that applying a glide-path is likely to result in a **better estimate of expected inflation** if short-term market conditions impact the time it will take for expected inflation to revert to the RBA's mid-point.*¹⁴

Symmetric and enduring application

The Draft Position Paper concludes that the glide-path approach should be applied on a symmetric and enduring basis. Thus, the speed of reversion is assumed to be the same regardless of whether current inflation is above or below 2.5% and, under an enduring application, the glide-path will have little practical effect when current inflation estimates are close to 2.5%, but will automatically have a more pronounced effect during periods of sustained high or low inflation:

*We consider that a linear glide-path, applied symmetrically, should be applied on an enduring basis as it provides a robust method that can be used regardless of wide-reaching events or disturbances to market data.*¹⁵

2.6 A summary of the AER's rationale for change

The Draft Position Paper proposes two changes to its approach to estimating regulatory inflation:

- » The use of a 5-year term to ensure that what it 'takes out' of allowed revenues in the PTRM is equal to what it expects to 'put back' via RAB indexation in the RFM; and
- » The use of a glide-path to reflect the likelihood that expected inflation may take some time to revert back to 2.5% during periods of sustained high or low inflation.

The Draft Position Paper highlights that the AER considers that the proposed new approach:

- » Is superior to the old approach;
- » Produces the best estimate of expected inflation; and
- » Best promotes the NEO and NGO.

¹³ Draft Position Paper, p. 61, emphasis added.

¹⁴ Draft Position Paper, p. 62, emphasis added.

¹⁵ Draft Position Paper, p. 61.

3 The regulatory task: The best estimate of expected inflation that best promotes the NEO/NGO

Summary

- » Other than any specific requirements of the NER or NGR there are no objectives or considerations other than those embodied in the NEO, NGO and legislative Revenue and Pricing Principles that ought to guide the AER's decisions. When introducing the NEO, the Minister observed that *"This should be guided by an objective of efficiency that is in the long-term interest of consumers. Environmental and social objectives are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law."*¹⁶
- » The AER has previously stated *"In this context, for the allowed rate of return to contribute to the achievement of the legislative objectives it should reflect the efficient cost of capital. If it does, then it will (all else equal) promote both efficient investment in, and efficient use of, energy network services. An allowed rate of return that reflects the efficient market cost of capital will promote both investment and consumption efficiency."*¹⁷
- » ENA agrees with the AER's characterisation of the regulatory task set out above. Having estimated what it considers to be the efficient cost of capital, the AER should set the regulatory allowance accordingly. To do otherwise would be to contaminate the incentives for the efficient investment in, and the efficient utilisation of, regulated assets. This, in turn, has implications for dynamic efficiency.
- » In the current review, the AER has identified what it considers to be the best estimate of expected inflation that best promotes the NEO and NGO. Consequently, that best estimate should be adopted immediately.

3.1 The AER's regulatory task is defined by the NEO, NGO and Revenue and Pricing Principles

In its 2018 Rate of Return Instrument materials, the AER began by noting that its core regulatory task is to make decisions that will, or are likely to, achieve the NEO and NGO to the greatest degree:

The National Electricity Objective (NEO) and the National Gas Objective (NGO) establish the ultimate objective of our decision-making. In each

¹⁶ Legislative Council, South Australia, 16 October 2007, Hansard, p. 885.

¹⁷ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, p. 40, emphasis added.

case, the objective is to promote efficient investment in, and efficient operation and use of, the relevant electricity or gas services, for the long term interests of consumers with respect to the price, quality, safety, reliability and security of supply.

*We may make an instrument only if satisfied the instrument will, or is most likely to, contribute to the achievement of the national electricity and gas objectives to the greatest degree.*¹⁸

The AER also noted the importance of the Revenue and Pricing Principles (RPP) in guiding how to best achieve the NEO and NGO:

In support of the national gas and electricity objectives, the National Electricity Law and National Gas Law set out Revenue and Pricing Principles. These principles underlie the achievement of the national gas and electricity objectives and we have had particular regard to these principles in making our decision.

The revenue and pricing principles are expressed in essentially similar terms for both electricity and gas. In summary, those principles are:

- *A service provider should be provided with **a reasonable opportunity to recover at least the efficient costs the service provider incurs** in—*
 - *providing regulated services; and*
 - *complying with a regulatory obligation or requirement or making a regulatory payment.*
- *A service provider should be provided with effective incentives in order to promote economic efficiency with respect to the regulated services they provide. The economic efficiency that should be promoted includes—*
 - *efficient investment the network with which the service provider provides regulated services; and*
 - *the efficient provision of regulated services; and*
 - *the efficient use of the system with which the service provider provides regulated services.*
- *Regard should be had to the regulatory asset base adopted in any previous determination or arrangement, or in the Rules.*
- *A price or charge for the provision of a regulated service should allow for a return commensurate with the regulatory and commercial risks involved in providing the service.*

¹⁸ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, p. 29.

- *Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated service provider in the relevant system.*
- *Regard should be had to the economic costs and risks of the potential for under and over utilisation of the relevant system.*¹⁹

The AER has explained—not only in the 2018 rate of return materials, but consistently and repeatedly in previous consultations on other matters—that its regulatory task is defined by the requirements of the NEO, NGO and the Revenue and Pricing Principles. Other than any specific requirements of the NER or NGR there are no objectives or considerations other than those embodied in the NEO, NGO and RPP that ought to guide the AER’s decisions and applying the relevant rules.

This has also been affirmed by the Australian Competition Tribunal, which noted in 2016 decision that:

*The [NEL] set out to establish a single national regulatory framework for electricity networks, and introduced important changes to the AER’s powers, including the prescription of the national electricity objective (the NEO), and the revenue and pricing principles (RPP), to guide the AER in making regulatory decisions, and in other respects.*²⁰

The Australian Competition Tribunal also noted in 2009 that:

The NEL requires that in performing or exercising its economic regulatory functions or powers the AER must:

- *do so in a manner that will, or is likely to, contribute to the achievement of the national electricity objective (s 16(1)); and*
- *take into account the revenue and pricing principles (s 16(2)).*

...

*The national electricity objective provides the overarching economic objective for regulation under the NEL: the promotion of efficient investment and efficient operation and use of, electricity services for the long term interests of consumers. Consumers will benefit in the long run if resources are used efficiently, that is if resources are allocated to the delivery of goods and services in accordance with consumer preferences at least cost. As reflected in the revenue and pricing principles, this in turn requires prices to reflect the long run cost of supply and to support efficient investment, providing investors with a return which covers the opportunity cost of capital required to deliver the services.*²¹

¹⁹ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, p. 30, emphasis added.

²⁰ Applications by Public Interest Advocacy Centre Ltd and Ausgrid [2016] ACompT 1, para 21.

²¹ Application by EnergyAustralia [2009] ACompT 8, paras 11 and 14, as cited subsequently by the Federal Court in ActewAGL Distribution, Partnership between Actew Distribution Ltd and Jemena Networks (ACT) Pty Ltd v Australian Energy Regulator [2011] FCA 639 at para 18.

3.2 The original policy intent of the NEO, NGO and RPP

Given that the NEO, NGO and RPP must guide the AER's decision-making, it is worth understanding clearly the original policy intent of the framers of the NEO, NGO and RPP.

This policy intent is explained in the Second Reading Speech by the Minister for Mineral Resources and Development (South Australia) of the Bill that introduced via amendments the current NEO (and NGO) and RPP.²²

The Minister stated the following in relation to the NEO (and NGO):

This Bill incorporates an amended version of the National Electricity Market Objective from the existing National Electricity Law. It is now known as the National Electricity Objective and will be mirrored in the National Gas Law.

...

The National Electricity Objective is to promote efficient investment in, and the efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the safety, reliability and security of the national electricity system.

Just as the Australian Energy Market Commission must test changes against the objective of the law when making rules, the Australian Energy Regulator must perform its functions in a manner that will or is likely to contribute to achieving the objective of the law.²³

The Minister went on to note specifically that the NEO did not extend to broader social and environmental objectives:

*It is important to note that the National Electricity Objective does not extend to broader social and environmental objectives. The purpose of the National Electricity Law is to establish a framework to ensure the efficient operation of the National Electricity Market, efficient investment, and the effective regulation of electricity networks. As previously noted, the National Electricity Objective also guides the Australian Energy Market Commission and the Australian Energy Regulator in performing their functions. This should be guided by an objective of efficiency that is in the long term interest of consumers. **Environmental and social objectives are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law.**²⁴*

The Minister made clear that “efficiency that is in the long-term interest of consumers”—as embodied in the NEO and NGO—is the *only* objective that must guide the AER's decisions. Extraneous objectives, including social objectives (such as fairness and equity), are not within the purview of the AER's economic regulatory

²² Legislative Council, South Australia, 16 October 2007, Hansard.

²³ Hansard, p. 885.

²⁴ Hansard, p. 885.

decisions as they are better dealt with by means outside the National Electricity Law (NEL) or National Gas Law (NGL) which enjoy greater transparency and democratic accountability.

The Minister then explained the intent of the RPP, and each of the principles in turn:

A key feature of the amended National Electricity Law is the inclusion of six principles that guide the development of the framework for the regulation of electricity networks. These revenue and pricing principles will guide the Australian Energy Market Commission in making the rules governing the regulation of electricity transmission and distribution networks, and the Australian Energy Regulator when making regulatory transmission or distribution determinations.

These principles are fundamental to ensuring that the Ministerial Council on Energy's intention of enhancing efficiency in the National Electricity Market is achieved. To provide certainty to the industry and consumers, this Bill will apply the principles through the National Electricity Law rather than the National Electricity Rules, where their predecessors were found. The aim of the pricing principles is to maintain a framework for efficient network investment irrespective of the evolution of the regulatory regime (via changes to the National Electricity Rules) and the industry. It is proposed that these revenue and pricing principles will be replicated in the new National Gas Law to ensure a consistent framework for energy access pricing.²⁵

As explained by the Minister in the extract above, the AER's decisions must be guided by the RPP—as the AER itself has highlighted on numerous occasions. Furthermore, the RPP were included in legislation rather than the Rules to ensure that they were an enduring basis for regulatory decisions impacting long-lived investments.

In relation to the first principle, the Minister explained that it is vital that NSPs be allowed to recover at least their efficient costs if they are to maintain their electricity networks to meet consumers' needs:

*The first of these principles requires that a regulated network provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing services, complying with a regulatory obligation or requirement or making a regulatory payment. **At least efficient cost recovery is vital if service providers are to maintain their electricity networks in order to meet community expectations of the service levels they receive, and to undertake further investment to serve Australia's growing population.**²⁶*

Nothing in the Minister's explanation of the first principle suggests that recovery of efficient costs is a matter that may be traded-off against, some other unspecified objective or principle. Nor does the Minister's explanation indicate that efficient cost

²⁵ Hansard, p. 887, emphasis added.

²⁶ Hansard, p. 887, emphasis added.

recovery is optional. Indeed, the Minister noted that at least efficient cost recovery is “vital” in order for NSPs to be incentivised to deliver regulated services appropriately.

Having explained the second and third principles, the Minister explained the fourth principle as follows:

It is also important that risks are appropriately compensated for when determining efficient revenues and prices. The fourth principle ensures this by requiring that prices and charges for the provision of regulated network services, allow for a return commensurate with the regulatory and commercial risks involved in providing the service to which that price or charge relates.²⁷

This principle is notable in that it singles out the allowed returns that must be provided to NSPs amongst all the other efficient NSP costs that must be compensated. It also relates to the first principle and is important because it relates to the first principle because if NSPs are not provided with a return commensurate with the “regulatory and commercial risks” involved in delivering regulated services, then they would not have been provided with a reasonable opportunity to recover at least the efficient costs of providing the regulated services.

Finally, the Minister explained the fifth and sixth principles as follows:

*The fifth principle explicitly requires the Australian Energy Regulator to have regard to the economic costs and risks of the potential for under and over investment by a regulated network service provider in its network. **The cost of under investment is lower service standards for consumers and ultimately higher costs to correct these**, while the cost of overinvestment is unnecessarily high prices to consumers. This principle will ensure that Australian consumers receive the level of service that they expect and at the right price.*

*The final principle requires that regard be had to the economic costs and risks of the potential for under and over utilisation of a service provider's network. This principle guides decision makers to consider the efficiency of the usage of existing assets and balance this against the principle of over and under investment. Utilisation is another important indicator of whether the network is operating efficiently. Underutilisation over a previous regulatory control period might indicate that prices have been set too high. It may also be an indicator of over investment, which can also result in high prices. Either way it can have adverse consequences on consumers. **Conversely, over utilisation is an indicator of under investment which can result in poor service standards.**²⁸*

As the Minister explained, it is an explicit requirement on the AER to have regard to the risk that its decisions may lead to underinvestment by NSPs, that results in a lower standard of service to consumers in the short-run that is ultimately more costly to consumers over the long run to rectify. Underinvestment can occur if the regulatory

²⁷ Hansard, p. 887.

²⁸ Hansard, p. 888, emphasis added.

framework prevents networks from recovering at least their efficient costs (principle 1) and if networks are not provided with a return that is commensurate with the regulatory and commercial risks associated with delivering the regulated services (principle 4).

In summary, it is clear from the Second Reading Speech that:

- » The *only* objective that the AER should have regard to is efficiency that is in the long-term interest of consumers. Other objectives are to be disregarded by the AER when making its decisions. The NEO and NGO do not specify smoothness of prices to consumers over time as an objective that sits above, or even contributes to, the achievement of the NEO and NGO.
- » The RPP do not conflict with one another. Rather, they are complementary, and focus the AER towards ensuring that the AER's decisions do not incentivise inefficiently low/high investment by NSPs or network utilisation by consumers—by ensuring that:
 - the AER's decisions provide an opportunity for NSPs to recover at least their efficient costs; and
 - NSPs are provided with a return that is commensurate with the regulatory and commercial risks associated with delivering the regulated services.
- » The RPP do not specify smoothness of prices to consumers as an objective that sits above, or even contributes to, the NEO and NGO.

3.3 The NEO and NGO are best promoted by setting the allowed return in each year to be commensurate with the financing costs of a benchmark efficient NSP

Efficient incentives for investment and consumption of regulated services are created by setting allowed revenues commensurate with efficient costs

The AER has explained that each of the Revenue and Pricing Principles must be balanced in a way that best achieves the NEO and NGO objectives. For instance, when setting the allowed rate of return, the AER has explained that:

...if the rate of return is set at a rate that is too low to promote efficient investment in infrastructure, it will lead to underinvestment. It may not allow a provider a reasonable opportunity to recover at least its efficient costs in providing services or complying with regulatory obligations. It will not provide effective incentives for efficient investment in, or provision for, or use of services. It will not be a rate that provides for a return that is likely to be commensurate with the commercial and regulatory risks. It may lead to various economic costs and risks that might arise from under-investment in the network system. All of these factors would compromise the realisation of the national gas and electricity objectives.

Similarly, if the rate of return is set too high, it will provide an incentive to over-invest in network infrastructure. It will not reflect a return that is commensurate with the regulatory and commercial risks. It will not

promote efficient investment in the network system and it is likely to lead to underutilised investment in regulated assets.²⁹

The AER goes on to conclude that the NEO and NGO are best promoted by setting the allowed return to be commensurate with the efficient cost of capital – the return that real-world market investors require from an investment in regulated assets:

In this context, for the allowed rate of return to contribute to the achievement of the legislative objectives it should reflect the efficient cost of capital. If it does, then it will (all else equal) promote both efficient investment in, and efficient use of, energy network services.

An allowed rate of return that reflects the efficient market cost of capital will promote both investment and consumption efficiency.³⁰

ENA agrees with this conclusion. ENA's view is that if the AER's current approach is resulting in regulatory allowances that are not commensurate with the financing costs of a benchmark efficient network, then an alternative regulatory approach that does produce allowances that are commensurate with the financing costs of a benchmark efficient network should be adopted without delay. Failure to do so would not best achieve the NEO and NGO.

The AER's consideration of a possible transition that delays the shortening of the inflation term

The Draft Position Paper states that:

Our draft position is that, a term that matches the length of the regulatory period together with a glide-path as outlined above, will provide a method likely to result in the best estimate of expected inflation, and therefore achieves the NEO/NGO to the greatest degree.³¹

That is, the AER considers that the NEO and NGO would be best achieved by adopting an inflation term that matches the length of the regulatory period together with a glidepath. However, the AER is seeking views on whether it should implement a transitional arrangement that would defer the shortening of the inflation term. This would effectively delay the adoption of what the AER considers to be the best estimate of inflation and an approach that the AER considers would best achieve the NEO and NGO.

3.4 Real-world consequences of the AER's current inflation method

ENA has provided analysis in previous submissions that the under-recovery of efficient returns by networks, as a consequence of the AER's current inflation method,

²⁹ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, pp. 30-31.

³⁰ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, p. 40, emphasis added.

³¹ AER Draft Position Paper, p.62

may result in networks delaying or abandoning efficient investments that would promote the long-term interests of consumers.

This is evidenced by TransGrid's recent application to the AEMC for a Rule Change that seeks to adjust the existing inflation methodology applied in the framework with respect to large greenfield projects to allow certain proposed Integrated System Plan (ISP) investments to proceed.

TransGrid explained in its Rule Change Proposal to the AEMC that:

The Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) identifies an optimal path for the development of the transmission system to provide reliable, secure and affordable electricity to electricity consumers across the National Electricity Market.³²

That is, the ISP identifies certain network investments that would improve service quality to consumers over the long run and would therefore promote the long-term interests of consumers.

However, TransGrid went on to explain that the AER's current treatment of inflation was contributing to a situation that resulted in these efficient investments being rendered economically unviable:

The regulatory returns set out in TransGrid's current determination and also the 2018 Rate of Return Instrument (RORI) are intended to provide a revenue allowance to enable the recovery of efficient financing costs over the life of the asset. These include an assumption of 60% debt funding, a level of financial risk commensurate with a strong investment grade credit rating (Standard & Poor's BBB+), and a return to equity investors assuming 40% equity funding. Our analysis confirms that cash flows from PEC (and many other ISP projects) will be insufficient to support 60% debt funding at a BBB+ credit rating (or indeed an investment grade credit rating at all) for an extended period of time. This has two implications, each of which creates a significant barrier to securing the funding necessary to proceed with the project and substantially undermines the incentive to invest. Either:

- the project would require equity funding substantially in excess of the 40% ratio provided for in the revenue allowance, resulting in an uneconomic return to equity investors and lower than the equity returns to those set out in the AER's RORI (the return on additional equity would be at the regulated cost of debt); or*
- the project could seek to proceed with 60% debt funding but this could only occur on a sub-investment grade ('junk') basis resulting in debt funding costs substantially in excess of those compensated for in the revenue allowance, causing serious adverse impacts to financial resilience increasing the risks borne by equity holders to significantly above the level contemplated in the AER's RORI. Further, the shortfall between compensated debt costs and those incurred at sub-*

³² TransGrid Rule Change Proposal covering letter, 30 September 2020, p. 1.

investment grade would have to be borne by equity holders reducing returns to equity holders below those set out in AER's RORI.

Both of these outcomes are inconsistent with the design of the regulatory framework.³³

TransGrid has explained that despite extensive engagement with the AER to explain how its existing inflation approach was contributing to the outcomes described above, it was unable to find an appropriate resolution within the existing regulatory framework. Therefore, the only options available to TransGrid were to either:

- » Abandon the proposed ISP projects, which are efficient and would promote the long-term interests of consumers, on the grounds that they would be economically unviable under the existing regulatory arrangements; or
- » Seek a Rule Change that would alter the existing regulatory arrangements in respect of the proposed ISP projects, thus allowing them to proceed on a financeable basis.

As explained by the South Australian Minister for Mineral Resources and Development during the Second Reading Speech of the Bill of amendments that introduced the NEO (and NGO) and RPP, underinvestment (i.e., the foregoing of efficient investments by networks) would have two harmful outcomes for consumers:³⁴

- » lower service standards for consumers (potentially over the short term as well as the long term); and
- » ultimately higher costs over the long-term to correct past underinvestment.

The risk of these outcomes—neither of which would promote the long-term interests of consumers—could be minimised by ensuring that:

- » networks are provided with a reasonable opportunity to recover the efficient costs of delivering the regulated services; and
- » networks are provided with a return that is commensurate with the regulatory and commercial risks associated with delivering the regulated services.

ENA has highlighted in its previous submission that the AER's existing inflation method has resulted in networks under-recovering the efficient real return on equity for several years. The AER's existing inflation method has also contributed to a situation where, for the first time, networks would be put in a sustained loss-making situation. This fact has been confirmed by the AER's own advisers, Sapere.

Under these circumstances, ENA considers that there is a real prospect that, without improved approaches to deliver balanced inflation estimates, other networks may be forced to abandon or delay efficient investments that would promote the long-term interests of consumers—an outcome that the original framers of the NEO/NGO and

³³ TransGrid, National Electricity Rules change proposal, Making ISP projects financeable - Participant

Derogation, 30 September 2020, pp. 14-15.

³⁴ Hansard, p. 888.

Revenue and Pricing Principles clearly sought to avoid. This would clearly be an unsustainable outcome, and would, over time, require significant adjustments to the existing regulatory framework to allow efficient investments to proceed in the future.

ENA submits that it would be preferable for the AER to adopt an approach that best achieves the NEO/NGO immediately, to reduce the prospects of such outcomes.

4 The best estimate of expected inflation

Summary

- » ENA supports the targeting of a 5-year term for inflation and notes that:
 - There are two potential roles for inflation in the regulatory framework:
 - Regulatory inflation can be set to ensure that what is taken out of allowed revenues in the PTRM is equal to what is expected to be put back in via RAB indexation in the RFM; or
 - Regulatory inflation can be used to convert nominal allowed returns into real returns.
 - The Draft Position Paper is clear about the AER's adoption of the 'take out what you expect to put back' role for regulatory inflation.
 - Thus, and consistent with Lally's advice, the term of the inflation parameter is determined by the RFM and not the RoRI.
- » ENA supports the additional weight applied to current market data under the 5-year glide-path approach:
 - Retaining a 10-year term while adding a glide path for years 3-5 would produce outcomes very similar to the current approach and the very material discrepancy between the AER's inflation expectations and market data would remain.
- » ENA has concerns about biases in the pivotal RBA Year 2 forecasts, particularly in the current low-inflation environment:
 - RBA has consistently over-forecast Year 2 inflation over the last decade. Illustrating a clear pathway back towards its inflation target band can affect market expectations and assist the RBA in achieving its policy objective.
- » Under a framework where the AER 'takes out' what it expects to 'put back in,' what is required is the best possible estimate of future outturn inflation - because that is what is 'put back in.'
- » However, the Regulatory Economics Unit (REU) suggests that market estimates should not be used even if they were found to be superior in predicting actual inflation outcomes. ENA considers this to be a very important point within the context of this review. Stakeholders would benefit from a clear articulation in the Final Position Paper as to whether the AER agrees with the REU on this point and whether it has dismissed market estimates on the basis of *a priori* concerns about potential biases, or because it considers that other approaches produce superior forecasts of outturn inflation in the prevailing market conditions.

- » ENA raises three key points in relation to the assessment of potential biases:
 - It is important that the Final Position Paper contains a balanced analysis of all biases, including potential biases in the RBA's forecasts.
 - A balanced assessment of biases would consider how various approaches perform in the prevailing market conditions, not just on average over a range of market conditions.
 - When considering biases, the appropriate benchmark or test is the extent to which an approach is able to forecast actual inflation outcomes.
- » Under the 'take out what you expect to put back' framework, the goal is to produce the best possible forecast of what you expect to put back. Since it is actual inflation outcomes that will be 'put back,' the goal is to produce the best possible forecast of actual inflation at the time of each determination.

4.1 ENA supports the 5-year term for inflation

Take out what you expect to put back in

As indicated in Section 2 above, the Draft Position Paper is clear about the role that the inflation parameter plays within the AER's regulatory framework. Specifically, the AER seeks to match the deduction from allowed revenues that occurs in the PTRM with the expected benefit of RAB indexation that occurs in the RFM. As the RFM adds back five years of inflation, the PTRM deduction must be set equal to the expected value of five years of inflation.

Potential roles for regulatory inflation

In his recent report for the AER, Lally (2020)³⁵ notes that the AER's Discussion Paper³⁶ presents two contradictory rationales for the role of the regulatory inflation parameter:

- » Regulatory inflation can be set to ensure that what is taken out of allowed revenues in the PTRM is equal to what is expected to be put back in via RAB indexation in the RFM; or
- » Regulatory inflation can be used to convert nominal allowed returns into real returns.

The AER (2020, pp. 10-12) offers contradictory rationales for the inflation deduction in the revenue equations. Initially, it argues that the deduction in (say) equation (2) is to offset (on average) the inflating of the RAB in equation (1). It then asserts that the deduction is to convert the nominal WACC in these revenue equations to a real WACC and, given its use of the ten-year WACC, it therefore estimates the expected inflation rate over ten years so that the terms match. The claim concerning conversion from

³⁵ Lally, M., 8 July 2020, *Review of the AER's inflation forecasting methodology*.

³⁶ AER, May 2020, *Discussion Paper: Regulatory treatment of inflation*.

nominal to real is not correct; conversion would require division in accordance with the expectation version of the Fisher formula rather than subtraction. The correct rationale is that noted first by the AER.³⁷

It is important to note that Lally (2020) identifies that the two rationales are contradictory. Indeed, they are mutually exclusive in that it is impossible to achieve both simultaneously.

The regulatory framework must *either* ‘take out what is expected to be put back in’³⁸ or convert nominal returns to real returns. That is, the deduction for inflation can either be set equal to what is expected to be added back via RAB indexation (implying a 5-year term), or it can be set equal to an estimate of the inflation component of the allowed return on debt or equity (implying a 10-year term).

The Draft Position Paper is clear about the fact that the first interpretation is adopted in the AER’s regulatory framework. Thus, the term of inflation is determined by the RFM and set to five years – 5-year inflation must be deducted because that is what is ‘put back in.’

There is no link to the RoRI under the AER’s interpretation

Under the framework adopted in the Draft Position Paper, the term for the inflation parameter is determined by the RFM. Since the RFM adds back five years inflation, the PTRM must deduct five years of inflation.

Under this interpretation, the term of allowed returns in the RoRI is not relevant. That is, the term of the inflation parameter is determined by the RFM and not the RoRI.

In this regard, ENA supports the AER’s conclusion that:

At this time, it is not clear to us that the term for the inflation expectations needs to be aligned to that used for the determination of the rate of return.³⁹

In summary, it is important that the regulatory inflation parameter is estimated in a way that is consistent with its role within the regulatory framework. Having determined the role, the AER correctly proposes an estimate that is consistent with that role.

It is important for the AER and stakeholders to be clear about the framework the AER has adopted in its Draft Position, which carries with it the implication that a proposal of a different term represents a departure from the AER’s current view on the role of the inflation parameter in the regulatory framework.

³⁷ Lally (2020), p. 5.

³⁸ That is, make a deduction to allowed revenues in the PTRM that is commensurate with the expected benefit of RAB indexation in the RFM.

³⁹ Draft Position Paper, p. 48.

10-year inflation is problematic for other reasons

Even if the objective of regulatory inflation was to preserve real returns, 10-year inflation does not achieve that objective in any event.

To see this, note that the AER first estimates the required nominal return. Under the ‘real returns’ interpretation, the nominal return embeds expected inflation. If actual inflation turns out to be lower than expected, investors will require commensurately lower returns. The converse applies if actual returns turn out to be higher than expected. That is, under this interpretation the regulatory framework makes an adjustment to reflect the extent to which a difference between actual and expected inflation affects the returns that investors require.

But what if actual inflation turns out to be precisely in line with the AER’s expectations in every regulatory year? In that case, the regulatory regime should deliver the AER’s original estimate of the required nominal return – because there is no need for any adjustment because actual inflation turns out to be precisely in line with expectations.

The current framework, however, does not achieve that objective. To see this, consider the example below where inflation is expected to increase to 2.5% in Year 3, and where actual inflation turns out to be precisely in line with expected inflation in every year.

Year	1	2	3	...
Expected inflation	1.50%	1.80%	2.50%	...
Actual inflation	1.50%	1.80%	2.50%	...

In this case, the AER’s current approach would deduct 2.33% (10-year geometric mean) and add back 2.16% (5 years of actual inflation). Thus, investors would receive less than the AER’s estimate of the required nominal return even where actual inflation turns out to be precisely in line with expectations every year. That shortfall is never caught up and is a permanent under-recovery.

This problem is symmetric in the case where short-term inflation expectations are above 2.5%.

This problem would have to be addressed by any proponents of a 10-year inflation term. Positively, this problem does not arise under the framework of ‘taking out what you expect to put back in’ as adopted in the Draft Position Paper.

A 10-year glide path would not be worth the trouble

The Draft Position Paper suggests that the AER sees some merit in adopting a glide-path approach whether the inflation term is set to five or ten years.

ENA submits that, if a 10-year term is to be used – which is not supported by ENA – merely adopting a glide-path in Years 3-5 would produce figures that are very similar to the current approach. The problem that led to this review would remain – the

inflation estimation approach results in an estimate which remains unresponsive to market conditions and currently differs very materially from market expectations.

To see this, note that the various approaches apply different weights to three pieces of evidence – the RBA 1-year and 2-year forecasts and the 2.5% mid-point of the RBA target band. The different weightings are summarised in Table 1 below. A 10-year glide-path has the minor effect of moving 10% weight from the 2.5% mid-point to the RBA Year 2 forecast. The resulting estimate remains dominated by the 2.5% mid-point and will always produce a figure very close to 2.5% in all market conditions.

Table 1: Weight applied to evidence under various approaches

Evidence	'Old' approach	'New' approach	10-year glide-path
RBA 1-year	10%	20%	10%
RBA 2-year	10%	40% ⁴⁰	20% ⁴¹
2.5% mid-point	80%	40% ⁴²	70% ⁴³

4.2 ENA supports the additional weight applied to current market data under the 5-year glide-path

Increased weighting to market estimates rather than policy targets

The AER's proposed 'best estimate' is computed using a 5-year glide-path approach. This approach materially changes the weights applied to the three pieces of evidence to which the AER has regard, as shown in Table 1 above.

ENA notes that the RBA forecasts are made in light of all evidence available at the time, including market evidence. Thus, under the 'old' approach only 20% of the inputs to the regulatory inflation figure reflected any market evidence, whereas that proportion rises to 60% under the new approach.

ENA strongly supports the increased weighting applied to market estimates (as opposed to policy targets) under the new approach.

⁴⁰ 20% weight for Year 2, $20\% \times \frac{2}{3}$ weight for Year 3, and $20\% \times \frac{1}{3}$ weight for Year 4.

⁴¹ 20% weight for Year 2, $20\% \times \frac{2}{3}$ weight for Year 3, and $20\% \times \frac{1}{3}$ weight for Year 4.

⁴² 10% weight for Year 2, $10\% \times \frac{2}{3}$ weight for Year 3, and $10\% \times \frac{1}{3}$ weight for Year 4.

⁴³ 60% weight for Years 5-10, $10\% \times \frac{2}{3}$ weight for Year 4, and $10\% \times \frac{1}{3}$ weight for Year 3.

4.3 Networks remain concerned about potential biases in RBA forecasts

Concerns about bias in RBA forecasts in low-inflation environments

Table 1 above shows that the 5-year glide-path approach places 60% weight on RBA forecasts. For this reason, it is important that stakeholders can have confidence in these forecasts at the time of every regulatory determination.

Figure 1 below shows that, over the last decade, RBA forecasts have been persistently and materially higher than actual inflation outcomes. Thus, over that period, what would have been 'taken out' is materially more than the average of what would have been 'put back in' under the new approach.

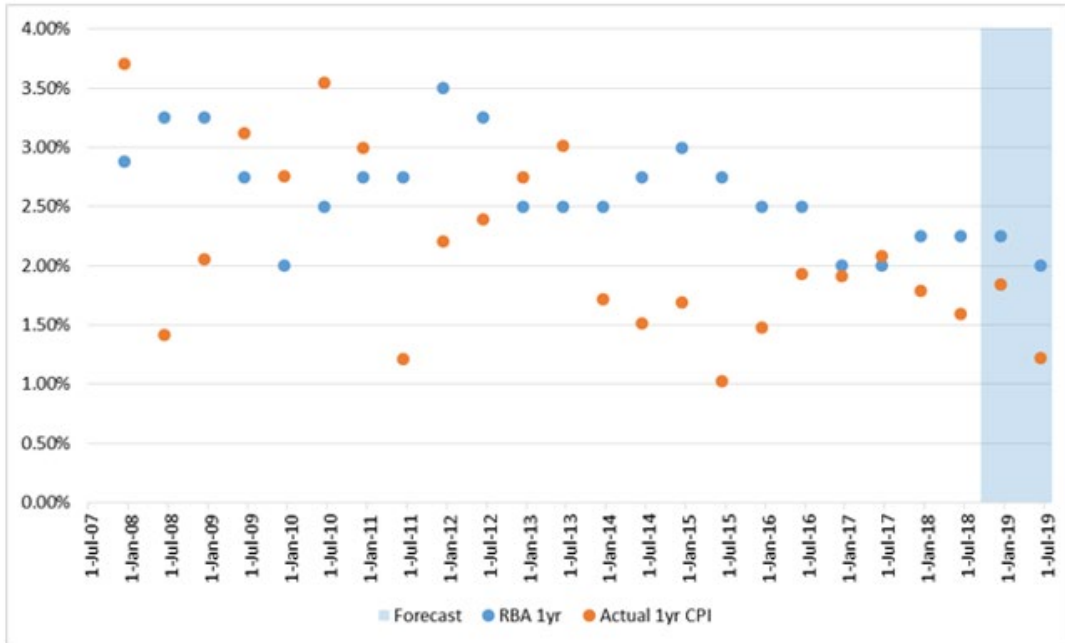
The figure indicates that, although RBA forecasts might be unbiased over the long run, there appears to be a consistent upward bias in low-inflation conditions, such as we are experiencing now.

Such a bias might eventuate from the fact that the RBA has a clear imperative to drive inflation upwards towards the target band. Illustrating a clear pathway back towards its inflation target band can affect market expectations and assist the RBA in achieving its policy objective.

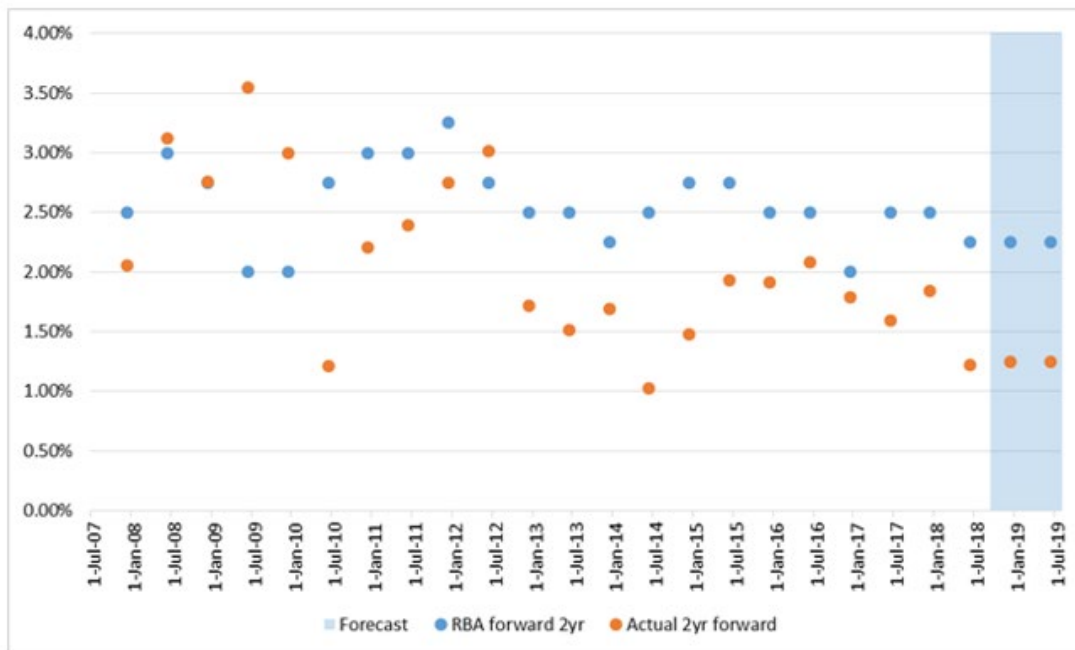
It is possible that the RBA's forecast of inflation is the best possible forecast and that outturn inflation has turned out to be below that forecast by random chance. Yet as we are approaching 10 years of consistent over-forecasting, it is becoming less likely that the difference can be explained by random chance and more likely that there is a systematic bias in low-inflation conditions.

Figure 1: RBA forecasts vs. actual inflation for that year⁴⁴

Year 1 forecast vs. actual



Year 2 forecast vs. actual



Source: RBA.

The appropriate test of forecast accuracy

In the context of the current review, it is important to recognise that what we require is the best possible forecast of future outturn inflation. This is because the AER seeks to ‘take out’ what it expects to ‘put back,’ and what it puts back is determined by outturn inflation.

The Draft Position Paper contains some analysis from the ACCC’s Regulatory Economics Unit (REU) that suggests otherwise:

Therefore, REU considers that even if the BBIR and zero coupon inflation swaps were found to be historically relatively accurate in predicting actual inflation, such findings are not sufficient for adopting these raw implied inflation estimates. The reason is that there is considerable evidence that the raw implied inflation estimates from the BBIR and zero coupon inflation swaps are unlikely to correspond to market inflation expectations.⁴⁵

That is, the REU suggests that breakeven or swaps estimates should not be used even if they were found to be superior in predicting actual inflation outcomes. ENA considers that this conclusion is incorrect within a framework where the AER is seeking an estimate of what it expects to ‘put back in.’ What is required within that framework is the best possible estimate of what is expected to be put back in. Thus, what is required is the best possible estimate of future outturn inflation.

ENA considers this to be a very important point within the context of this review. Stakeholders would benefit from a clear articulation in the Final Position Paper as to whether the AER agrees with the REU on this point and whether it has dismissed market estimates on the basis of *a priori* concerns about potential biases, or because it considers that other approaches produce superior forecasts of outturn inflation in the prevailing market conditions.

The performance of the inflation swaps and glide-path forecasts

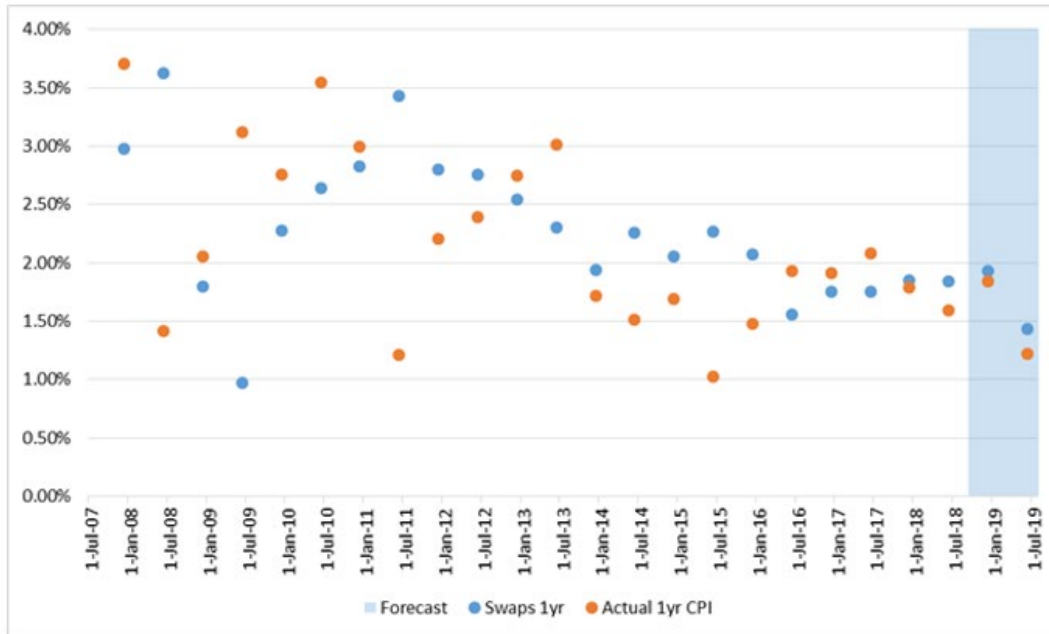
Figure 2 below shows that the inflation swaps estimates of inflation have been materially closer to actual inflation outcomes over the last decade. That is, the swaps market has provided a superior forecast of inflation relative to the RBA forecast.

⁴⁴ Note: In this figure, the X-axis refers to the start of the forecast period (i.e., one or two years before the actual outturn CPI figure used as the point of comparison). The blue shaded area represents periods where the RBA August Statement of Monetary Policy forecasts are used to extend the ‘actual inflation’ series. The data period ends in July 2019 to ensure that ‘actual inflation’ includes at least one full year of actual outturn inflation. This also avoids the disruption of the temporary effect of free childcare services.

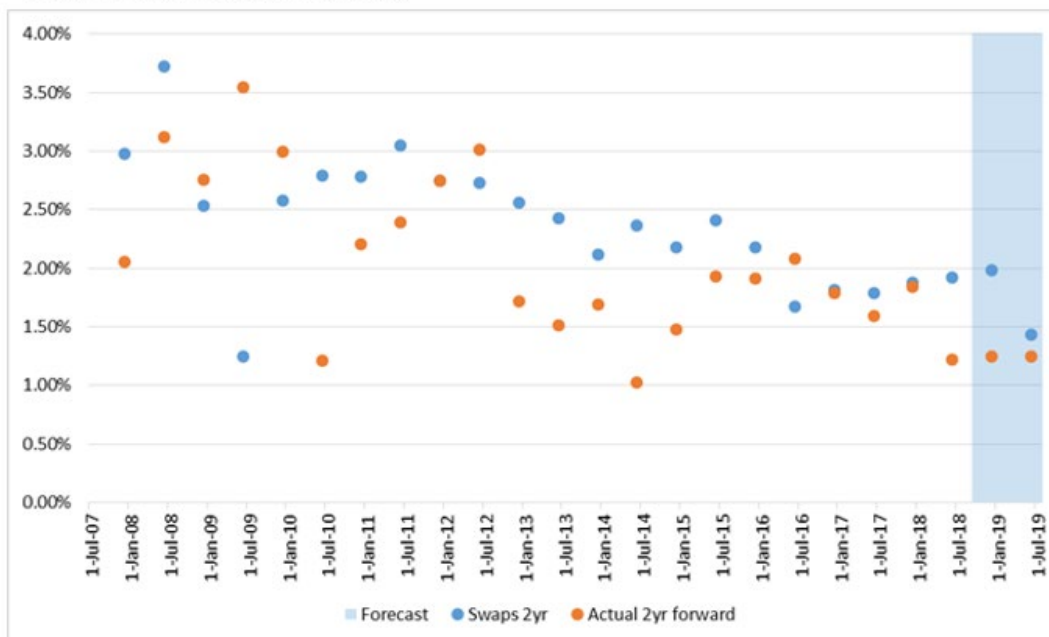
⁴⁵ Draft Position Paper, p. 122.

Figure 2: Inflation swaps forecasts vs. actual inflation for that year

Year 1 forecast vs. actual



Year 2 forecast vs. actual



Source: Bloomberg; RBA. Note: In these figures, the X-axis refers to the start of the forecast period (i.e. one or two years before the actual outturn CPI figure used as the point of comparison). The blue shaded areas represent periods where the RBA August Statement of Monetary Policy forecasts are used to extend the 'actual inflation' series. The data period ends in July 2019 to ensure that 'actual inflation' includes at least one full year of actual outturn inflation. This also avoids the disruption of the temporary effect of free childcare services.

Over the last decade, the swaps estimate has been statistically superior to the RBA forecasts according to standard statistical metrics, as illustrated in Table 2.

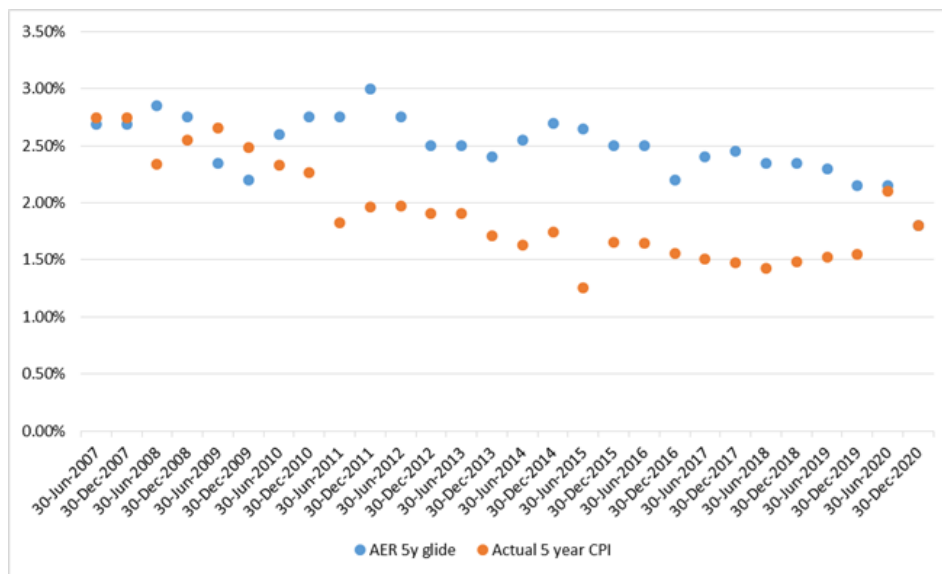
Table 2: Forecast error: RBA vs. inflation swaps: June 2010 to June 2019

Time period	Root mean squared error		Mean absolute deviation	
	RBA	Swaps	RBA	Swaps
Year 1 forecasts	0.92%	0.72%	0.78%	0.52%
Year 2 forecasts	0.89%	0.74%	0.81%	0.58%

Source: Bloomberg; RBA; CEG calculations.

As the RBA Year 2 forecast has been consistently above actual inflation, it follows that the 5-year glide-path estimate (which relies heavily on the Year 2 forecast) will also over-state actual inflation. This is illustrated in Figure 3 below.

Figure 2: 5-year glide-path estimates vs. 5-year actual inflation



Source: RBA.

The need for a balanced assessment of potential biases

The Draft Position Paper sets out a number of features of the inflation swaps estimate that have the potential to introduce a bias into the forecast of future inflation. ENA make two points in this regard:

- » **For stakeholders to have confidence in the regulatory regime, it is important that evidence is assessed in a balanced manner.** Thus, it is important to weigh any potential bias in the swaps estimates against any potential bias in the RBA estimates emerging from the record of evidence – such as those identified in the data above and in the fact that the achievement of RBA’s agreed monetary policy

objectives may be assisted by forecasts that demonstrate a systematic tendency to return to the target band over relatively short periods; and

- » **Irrespective of any theoretical biases, the figures above show that the swaps estimates have been superior to the RBA estimates over the last decade.** That is, theoretical explanations of why the swaps market *might* not do as good a job of forecasting future inflation as the RBA are redundant in light of evidence that, for the last decade, the swaps estimate *has* been empirically superior.

Moreover, it is important and a Rule requirement that the AER adopts the best estimate of expected inflation at the time of each determination. This requires the best estimate in the prevailing market conditions. In this regard, it is not enough to show that a particular approach or method produces an unbiased estimate on average over the long run across many determinations if that approach performs poorly in the currently prevailing market conditions.

In summary, there are three key points in relation to the assessment of potential biases:

- » **It is important that the Final Position Paper contains a balanced analysis of all biases, including potential factors biasing the RBA's forecasts.** The RBA should not be presumed to produce forecasts that are beyond challenge. There are both empirical and conceptual reasons to suggest that the RBA forecasts are not immune from bias. The figures above show that the RBA has consistently over-forecast inflation over the last decade, and projecting a return to inflation target band assists the RBA in achieving its policy objective.
- » **A balanced assessment of biases would consider how various approaches perform in the prevailing market conditions, not just on average over a range of market conditions.** When selecting a 'best estimate' for a particular regulatory determination it is important to consider whether there might be evidence of particular approaches producing biased estimates in the sort of market conditions that are prevailing at that time.
- » **When considering biases, the appropriate benchmark or test is the extent to which an approach is able to forecast actual inflation outcomes.** Under the 'take out what you expect to put back' framework, the goal is to produce the best possible forecast of what you expect to put back. Since it is actual inflation outcomes that will be 'put back,' the goal is to produce the best possible forecast of actual inflation at the time of each determination.

4.4 Possible modified glide-path approach

The Draft Position Paper seeks proposals on alternative ways of implementing the 5-year glide-path.

The previous section of this report documents that:

- » Under the 'take out what you expect to put back' framework that the AER has adopted, what is required is the best estimate of future outturn inflation – because that is the basis of what is 'put back'; and

- » Over the last decade, in the current low-inflation environment, the inflation swaps approach has produced consistently and materially superior estimates of future outturn inflation, relative to RBA forecasts.

This would imply that, in the prevailing low-inflation environment, the 5-year glidepath approach would be better based on the inflation swaps estimates for years 1 and 2 rather than the RBA forecasts.

5 Transition arrangements

Summary

- » The Draft Position Paper concludes that the proposed new approach is superior to the 'old' approach and that it will produce the best estimate of expected inflation that best promotes the NEO/NGO. ENA submits that, having reached that conclusion, the AER should implement the new approach immediately – there being no merit to prolonging the use of an inferior approach.
- » The NER and NGR require the AER to use the best estimate of expected inflation. If the proposed new approach produces that best estimate, it should be implemented immediately.
- » The Draft Position Paper correctly identifies that a transition may be required for 'framework changes,' but there is no reason to adopt a transition for a change in the approach to estimating a particular parameter.
- » The proposed new approach is best viewed as a simple parameter change rather than a framework change because:
 - The new approach involves changing the weights applied to the same three pieces of evidence;
 - The new approach makes no assumptions about any change in the way a benchmark efficient firm would be operated;
 - The new approach requires no change at all to any regulatory model – it involves inserting a different figure into the 'expected inflation' cell;
 - The inflation slate is 'wiped clean' at the end of every five-year regulatory period (through its replacement by a fresh estimate) so there is no sense in which a 10-year estimate should be left to 'run its course.' That is, the 10-year inflation figure is broken (indeed abandoned) at the end of every regulatory period under the AER's current approach; and
 - There is existing regulatory precedent for interpreting such changes as simple parameter changes.
- » The new approach has been advanced as a means of rectifying the 'mismatch' problem that the AER has identified. Continuing to use the approach prolongs the problem that the AER is seeking to fix with its new approach.
- » The objective of the exercise should not be to achieve NPV neutrality (i.e. waiting until the new approach produces estimates that are immaterially different from the old approach). Rather, the appropriate objective is to ensure NPV=0 (i.e., the regulatory allowance is commensurate with the regulator's best estimate of the efficient forward-looking costs).

- » The suggested triggers for delay or transition are inevitably arbitrary and uncertain. For example:
 - Waiting until the new approach produces an estimate close to 2.5% would amount to identifying a (mismatch) problem with the current regulatory approach, developing a new approach to address that problem, and waiting until the problem has resolved itself before implementing the corrected approach; and
 - There is no rationale for delaying the decision about regulatory inflation until the 2022 RoRI review because the inflation term is determined by the RFM and not the RoRI.
- » There is no basis for any suggestion that the AER's proposed change could be construed as a 'windfall gain' for any network.
 - Even with the immediate adoption of a 5-year term, the estimate remains well above inflation expectations indicated by market data.
 - At best, the new approach may reduce the windfall losses that networks have been incurring, and which would otherwise continue to incur.
- » When actual inflation turns out to be lower than the AER's estimate of expected inflation, network shareholders incur a windfall loss. This is because the regulatory allowance for the return on debt turns out to be lower than the nominal cost of debt that the efficient network is contractually obliged to pay. Over the last five years, the total loss over all network firms is approximately \$3.7 billion – or around \$740 million per year. Over the past ten years the total loss is \$4.5 billion
 - Substituting an estimate of inflation that is not the best estimate with the best estimate cannot give rise to a 'windfall gain'.

5.1 ENA agrees that the superior estimate should be adopted immediately

The Draft Position Paper is clear about the fact that the AER considers that its proposed new approach should be adopted immediately.

Having decided that the new approach:

- » Produces the best estimate of expected inflation;
- » Best promotes the NEO and NGO; and
- » Is superior to the old approach,

there would seem to be little merit in prolonging the use of an inferior estimate that does not best promote the NEO and NGO.

Further, the AER is required by the NER to use the method that the AER determines is likely to result in the best estimates of expected inflation in the PTRM,⁴⁶ and by the NGR to use the best forecast or estimate possible in the circumstances.⁴⁷

In this regard, the Draft Position Paper states:

*Having reached the draft position that there is likely to be a better way of estimating expected inflation, **we consider that it is necessary to implement that approach. Not doing so, would not promote efficient investment or use of the energy networks.** If we did not adopt a better approach, there would be consequences and distortions – over and under investment and inefficient use of energy networks – that would not easily be corrected given the long lives of network assets.*⁴⁸

The Draft Position Paper further explains that the long-term interests of consumers are best served by adopting the best available estimate, which best promotes the NEO and NGO:

Clearly, the precise outcome on revenues and prices depends on movements in data and forecasts before our proposed approach is applied. At the current time, market data and forecasts indicate that our proposed approach is likely to generate a lower estimate of expected inflation and therefore higher revenues and prices than our current approach.

*If this occurs, we are of the view that it would be in the long-term interest of consumers. While it may be to consumers short-term advantage to have lower prices, we are concerned that in the long-term, **not adopting the best method will undermine efficient investment signals** and leave consumers with an energy network that does not deliver services that they are seeking in a safe and reliable way.*⁴⁹

ENA supports this reasoning and notes that it is consistent with the requirements of the NEO and NGO that are set out in Section 3 of this submission.

The AER has reached a decision about the approach that produces the best estimate of expected inflation that best promotes the NEO and NGO. Having reached that conclusion, ENA agrees that there is no merit in prolonging the use of what the AER considers to be an inferior estimate that does not best promote the NEO and NGO.

Indeed, ENA considers that any consideration of a transition should end at this point. Having identified what it considers to be a superior ‘best’ estimate that best promotes the NEO and NGO, and being required by the NER and NGR to use that best estimate, the AER should adopt that estimate immediately.

There would have to be a compelling case presented, grounded and evidenced in the NEO/NGO, to delay implementation of what the AER considers to be the best estimate, and no such case has been presented for the consideration of stakeholders.

⁴⁶ NER, cl 6.4.2(b)(1) and 6A.5.3(b).

⁴⁷ NGR, cl 74(2).

⁴⁸ Draft Position Paper, p. 83, emphasis added.

⁴⁹ Draft Position Paper, p. 83, emphasis added.

5.2 Is it a parameter or a framework change?

Parameter vs. framework changes

The Draft Position Paper suggests that there may be differences between parameter and framework changes (not that the NER or NGR provide for any different treatment of “framework changes”):

*We are of the view that no transition is required for the change to a glide-path. It is **not a framework change**, and is aimed at achieving the **most unbiased and best estimate of expected inflation over the given forecast term.**⁵⁰*

That is, the Draft Position Paper is clear about the fact that the glide-path is not a framework change and therefore requires no transition. This seems to leave open the possibility that the change to a 5-year term might be considered to be a framework change, in which case it is possible that some form of transition might be required – notwithstanding the clear statements to the contrary in the other parts of the Draft Position Paper that are cited above.

Why the proposed change is a parameter, not a framework, change

ENA considers that the proposed change to a 5-year term is best understood to be a parameter change. The AER frequently alters the relative weight it places on different pieces of evidence used to inform individual parameter estimates. An example of this is the decision by the AER in the 2018 RORI to assign a one-third weighting to broad A curves and two-thirds weighting to broad BBB curves to derive an accurate estimate of the yields from a BBB+ debt instrument.⁵¹

Such a change in weights on different data to inform a parameter estimate is also what is proposed by the AER here.

The only difference between the ‘old’ and ‘new’ approaches is that they apply different weights to the same three pieces of evidence – the RBA 1-year and 2-year forecasts and the 2.5% mid-point of the RBA target band. The different weightings are summarised in Table 2 below.

⁵⁰ Draft Position Paper, p. 84, emphasis added.

⁵¹ AER, 2018, Rate of Return Instrument, Final Decision, Explanatory Statement, p.291

Table 3: Weight applied to evidence under ‘old’ and ‘new’ approaches

Evidence	‘Old’ approach	‘New’ approach
RBA 1-year	10%	20%
RBA 2-year	10%	40% ⁵²
2.5% mid-point	80%	40% ⁵³

Source: AER.

Thus, the change in approach:

- » Does not introduce any new evidence;
- » Makes no assumptions about any change in the way a benchmark efficient firm would be operated;
- » Does not follow a rule change altering the framework; and
- » Requires no change to any regulatory model used by the AER.

It is a matter of assigning different weights to the same three pieces of evidence and inserting the different output figure into the (unchanged) AER regulatory models.

For all of these reasons, ENA considers the proposed change is best characterised as a simple change to one of the parameters that is entered into the AER’s regulatory models.

Is the proposed change to the term of the inflation estimate a framework change?

One question that arises is whether the change in the term of the inflation estimate (from 10 years to 5) amounts to a change in the ‘framework.’

This is not the case. The argument that such a move represents a framework change would only have substance if the 10-year inflation parameter had some effect beyond the contemporaneous regulatory period. That is, if the AER adopted an inflation figure that then had some effect on regulatory allowances for the following 10 years, there might be an argument for allowing that process to ‘run its course’ before changing to a new approach. Yet that is not the case here. The AER is not ‘breaking’ any series by immediately adopting its new approach.

Rather, under the ‘old’ approach, the AER adopts a regulatory inflation estimate for a particular regulatory period and the slate is ‘wiped clean’ at the end of that period. The regulatory estimate of inflation only impacts allowed revenues for a single regulatory period and there are no carry-over effects. Although, under the ‘old’

⁵² 20% weight for Year 2, $20\% \times \frac{2}{3}$ weight for Year 3, and $20\% \times \frac{1}{3}$ weight for Year 4.

⁵³ 10% weight for Year 2, $10\% \times \frac{2}{3}$ weight for Year 3, and $10\% \times \frac{1}{3}$ weight for Year 4.

approach, the regulatory inflation figure includes estimates for Years 6 to 10, it has no impact on allowed revenues in Years 6 to 10.

Indeed, that is the problem that the AER identifies in Figure 4 of the Draft Position Paper and which the AER now proposes to fix – 10-year inflation is deducted, 5-year inflation is added back, and then the whole system is reset before the mis-match can be rectified.

Regulatory precedent for changes in terms used to estimate parameters

At various times in the past, the Queensland Competition Authority and NSW Independent Pricing and Regulatory Tribunal have changed their approach to estimating the risk-free rate from using the yield on 5-year government bonds to using the yield on 10-year government bonds. In neither case was there any consideration of any transition period, nor any suggestion that this amounted to a ‘framework change.’

Rather, these infrastructure pricing and access regulators determined that the new approach produced a superior estimate and it was implemented at the next available regulatory determination.

In those cases, like the current inflation case, the change involved inserting a different figure into the relevant cell of the regulatory model.

Conclusion in relation to parameter vs. framework change

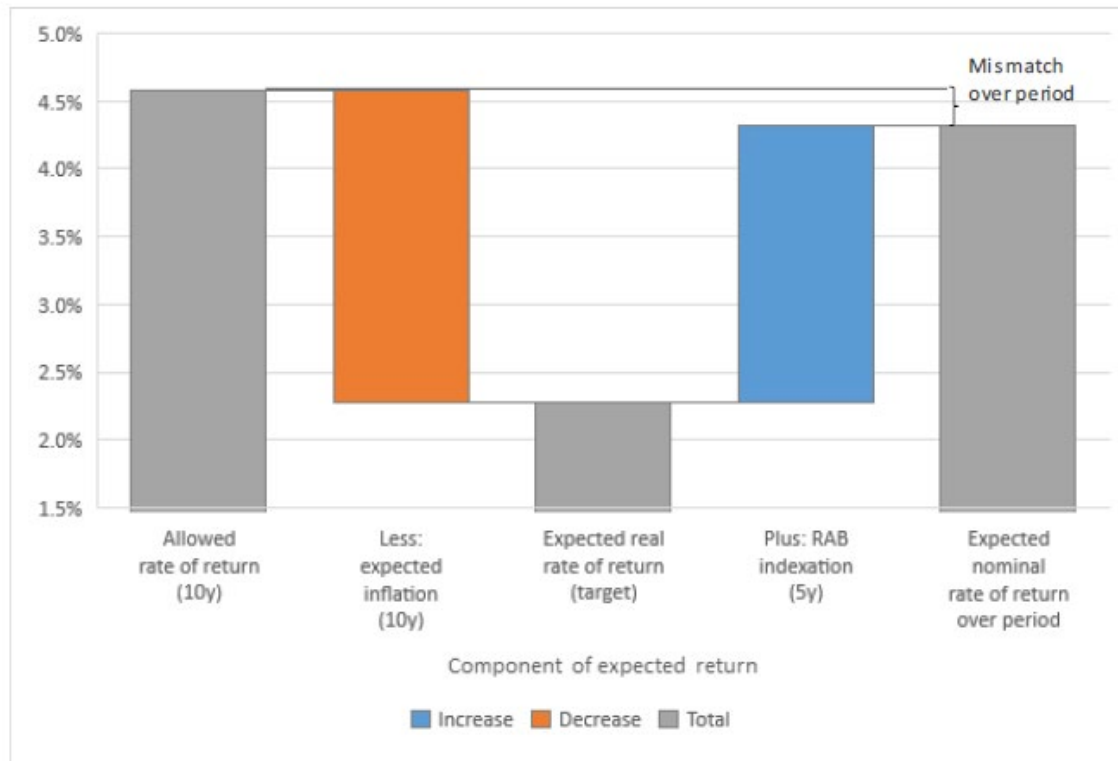
ENA submits that the proposed new approach is best viewed as a parameter change rather than a framework change because:

- » The new approach involves changing the weights applied to the same three pieces of evidence;
- » The new approach makes no assumptions about any change in the way a benchmark efficient firm would be operated;
- » The new approach requires no change at all to any regulatory model – it involves inserting a different figure into the ‘expected inflation’ cell;
- » The inflation slate is wiped clean at the end of every regulatory period, so there is no sense in which a 10-year estimate should be left to ‘run its course’; and
- » There is existing regulatory precedent for interpreting and treating such changes as parameter changes.

5.3 The proposed change has been designed to fix a problem

The Draft Position Paper identifies a mismatch problem inherent in the current approach – 10-year inflation is deducted, 5-year inflation is added back, and then the whole system is reset before the mismatch can be rectified. That problem is summarised in Figure 4 below, which is drawn from the Draft Position Paper.

Figure 3: Mismatch between 10-year expected inflation and 5-year RAB indexation



Source: Draft Position Paper, Figure 4, p. 47.

The new approach has been designed to rectify this mismatch problem.

Thus, at the end of the current regulatory period for each network the regulatory inflation slate is wiped clean. At that point, the AER has a choice of either:

- » Persisting with the old approach that produces the mismatch that the AER has identified; or
- » Adopting the new approach that has been designed to correct the mismatch problem.

ENA submits that, in such circumstances, the default must be (and the requirement of the NER and NGR is) to adopt the new approach rather than maintaining the problematic approach.

Adoption of the new approach is also supported by the fact that the AER has identified what it considers to be a superior 'best' estimate that best promotes the NEO and NGO. Again, the default in such circumstances must be to adopt the best estimate.

There would have to be a compelling case (grounded and evidenced in the NEO/NGO) presented to delay implementation of what the AER considers to be the best estimate and to maintain the problematic approach that generates the mismatch that the AER is now seeking to correct. No such case in support of a delay has been presented for the consideration of stakeholders.

5.4 Precedent from other changes in AER estimation approaches

The previous change in the approach to estimating inflation

No transition was applied by the AER when it adopted its current approach to estimating inflation in 2008.

The changes in the approaches to estimating beta and MRP in the 2018 RoRI

ENA considers that the proposed change in the approach to estimating expected inflation is no different conceptually to the changes that were made to the approaches for estimating beta and MRP in the 2018 RoRI.

In relation to beta, the AER concluded that the best estimate would be obtained by changing its approach such that it would no longer have any regard to any international evidence or to low-beta bias or the Black CAPM.

In relation to MRP, the AER concluded that the best estimate would be obtained by changing its approach such that it would no longer have any regard to any evidence other than historical excess returns.

In both cases, having determined that the new estimate is superior to the estimate that would have been obtained under the previous approach, the AER adopted the new estimate immediately. Again, it is difficult to see how there could be any merit in persisting with an approach that the AER considered to be inferior.

For the reasons set out in Section 5.2 above, we consider that the proposed new approach to inflation is a parameter change. The fact that the term of the estimate is changed is no reason, in and of itself, to delay implementation of the superior estimate.

The transition in relation to the trailing average return on debt

The AER adopted a 10-year transition when changing its approach to the allowed return on debt from the rate-on-the-day approach to the trailing average approach.

This change involved much more than a change to how the AER processed the available evidence when determining a parameter estimate. Rather, this involved a change in the AER's assessment of the efficient debt financing practice of the benchmark efficient entity and was therefore a framework change.

As explained by the Federal Court:

*The AER's decision to provide for a transition relied on what the AER considered a benchmark efficient entity, as described by it, would need to transition from the on-the-day approach to the trailing average approach.*⁵⁴

In that case, the AER determined that:

⁵⁴ Australian Energy Regulator v Australian Competition Tribunal & Anor (2017) FCAFC 79 at para 414.

- » Under the 'old' approach, a benchmark efficient network would have adopted a debt management approach that best matched the rate-on-the-day allowance;
- » Under the 'new' approach, a benchmark efficient network would adopt a debt management approach in line with the trailing average allowance; and
- » It would take 10 years for a network to build up a staggered maturity debt portfolio to match the trailing average allowance.

The transition in that case was designed to replicate the efficient costs that would be borne by a benchmark efficient network that was transitioning from one debt management approach to the other.

This scenario is very different from the beta, MRP and inflation examples. All of those cases involve the AER deciding to change the weights that it applies to the various pieces of evidence, leading to a different figure being adopted for a particular parameter. In none of those cases is the benchmark efficient network assumed to do anything differently.

5.5 'NPV neutrality' and 'NPV=0' are different things

The appropriate objective is NPV=0, which requires the best estimate of expected inflation

When discussing the merits of a transition in relation to expected inflation, the Draft Position Paper refers in some places to 'NPV neutrality.' For example:

Changing our approach has two expected impacts dependent on the year 1 and year 2 RBA inflation forecasts at the time of any final regulatory determination:

- *A glide-path approach will change the expected cash flows in a given regulatory period if the RBA forecast of inflation for year 2 is different to 2.5 per cent.*
- *A change in term will also change the expected cash flows in the future if the geometric average of the RBA's year 1 and year 2 forecasts of inflation does not equal 2.5 per cent.*

*In this sense, a change in the current (low forecast inflation) environment may not be NPV neutral and may change the risk consumers face from different short-term inflation forecasts at the time of determinations and the expected cost to consumers for regulatory periods commencing before 2025.*⁵⁵

In this context, ENA understands 'NPV neutrality' to be a reference to prices and revenues under the 'old' approach. That is, 'NPV neutrality' would be achieved if prices and revenues were the same under the proposed new approach as under the old approach.

⁵⁵ Draft Position Paper, p. 64, emphasis added.

If the proposed new approach is implemented immediately, it is likely that the result (at least in the short term) will be a lower estimate of expected inflation than under the old approach. Thus, an immediate change is unlikely to be ‘NPV neutral’ relative to the old approach.

The Draft Position Paper floats the idea of delaying implementation of the proposed new approach until the RBA 1-year and 2-year inflation forecasts are not materially different from 2.5%:

*While we are not committed to a position, if we were to provide a transition, one option would be to delay the change in the inflation term until expected inflation is not materially different to 2.5 per cent.*⁵⁶

In that case, the old and new approaches would produce similar figures and a change from one approach to the other would be ‘NPV neutral.’

However, the objective of the exercise should not be to achieve NPV neutrality (i.e., waiting until the new approach produces estimates that are immaterially different from the old approach). Rather, the appropriate objective is to ensure NPV=0 (i.e., the regulatory allowance is commensurate with the regulator’s estimate of the efficient forward-looking costs). This is achieved by immediately using the best possible estimate of expected inflation that best promotes the NEO and NGO, and which corrects the ‘mismatch’ problem that the AER has identified.

Further, such an approach involves the continued application (for an indefinite period) of a method that the AER has determined does not give rise to the best estimate of expected inflation.

Why ‘NPV neutrality’ is the wrong reference point

The Draft Position Paper identifies a ‘mismatch’ problem with the current 10-year estimate of expected inflation and proposes a new approach which corrects that problem. The Draft Position Paper notes that the AER considers the new approach to be superior to the old approach, that it produces the best estimate of expected inflation, and that it best promotes the NEO and NGO.

By definition, the new approach generates the correct incentives for efficient investment in, and utilisation of, regulated assets.

It is important that allowed revenues and prices are set to what the AER considers to be the ‘right’ level rather than maintained at the current level. That is, the NEO and NGO are best met by setting the correct regulatory allowance. Other social objectives are not relevant, as explained in Section 3 above.

It is also important for the purposes of maintaining regulatory confidence and predictability, which supports the efficient financing of network businesses services to customers, that this principal is applied symmetrically. In the 2018 RoRI process, the AER determined that the evidence supported a change to its ‘best’ estimates of

⁵⁶ Draft Position Paper, p. 70.

several parameters and the AER immediately implemented those new best estimates. The same applies in this case.

5.6 Changes to estimation approaches should not be characterised as ‘windfall’ gains and losses

Windfall gains and losses are defined relative to efficient costs

The Draft Position Paper sets out the AER’s concerns about ensuring that an immediate change to the new approach to estimating expected inflation does not result in any windfall gain or loss:

On the other side, based on current market data, our change in approach could lead to a significant increase in the revenue we would allow in our upcoming decisions. We need to be confident such an increase is a genuine result of a mismatch and not a windfall gain or loss.⁵⁷

It is important to recognise that a windfall gain or loss occurs when the regulatory allowance is above or below the AER’s assessment of the benchmark efficient costs.

A windfall gain or loss does not occur because the AER revises its ‘best’ estimate of a particular parameter, and a windfall gain or loss does not occur because allowed revenues or prices might change.

In the case at hand, the new approach has been proposed because the AER considers that it will result in allowed revenues best matching benchmark efficient costs in line with the NPV=0 principle and the NEO and NGO. That is, the new approach is specifically designed to ensure that there is *no* windfall gain or loss – that the regulatory compensation is just sufficient to cover the benchmark efficient costs.

The proposed change is designed to end a period of windfall losses

When actual inflation turns out to be lower than the AER’s estimate of expected inflation, network shareholders incur a windfall loss. This is because the regulatory allowance for the return on debt turns out to be lower than the nominal cost of debt that the efficient network is contractually obliged to pay.

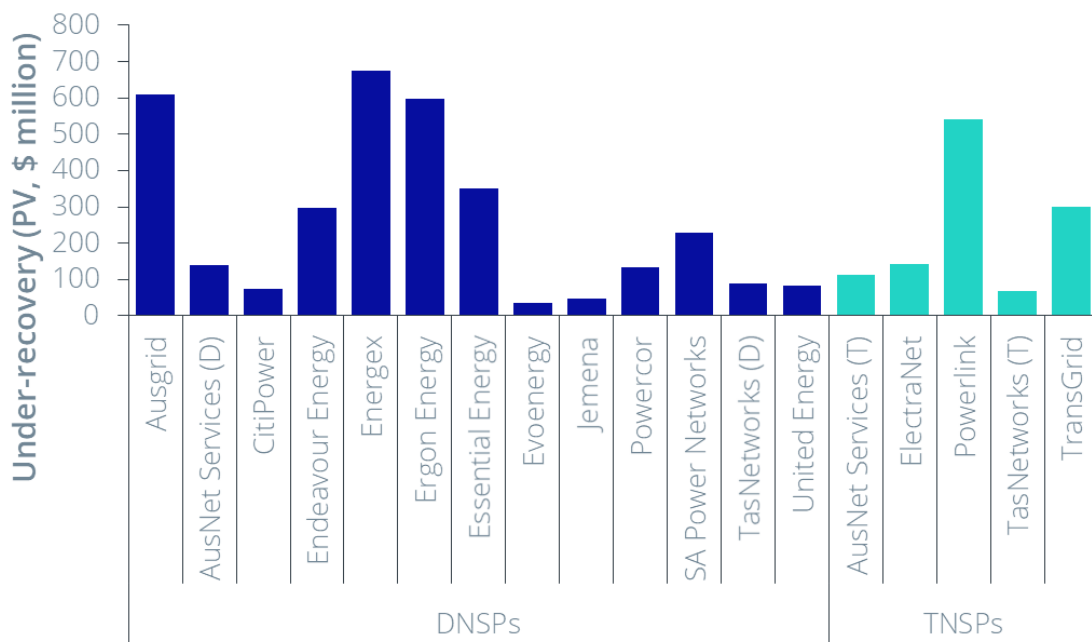
In recent years, the AER’s estimate of expected inflation has been consistently and materially higher than actual outturn inflation and this has resulted in windfall losses to network investors. The loss can be computed for each year by multiplying the differential between actual and expected inflation by 60% of the RAB. Adding the losses over the 2011-2020 period (and expressing losses in dollars as at 2020) results in an estimate of the windfall loss over the last ten years.⁵⁸ The total loss over all network firms is approximately \$4.5 billion – or around \$450 million per year (in 2020 dollars) – as shown in Figure 5 below.

⁵⁷ Draft Position Paper, p. 70.

⁵⁸ The required information is incomplete prior to 2011 and some networks were not regulated by the AER prior to that time.

ENA notes that this is a permanent loss that can never be recovered, and is not sought to be recovered in this process. Networks have paid their nominal interest bills and received insufficient regulatory compensation to meet those costs. A line has been drawn under that historical under-compensation and the current process is focused on ensuring that *future* compensation is more in line with benchmark efficient costs.

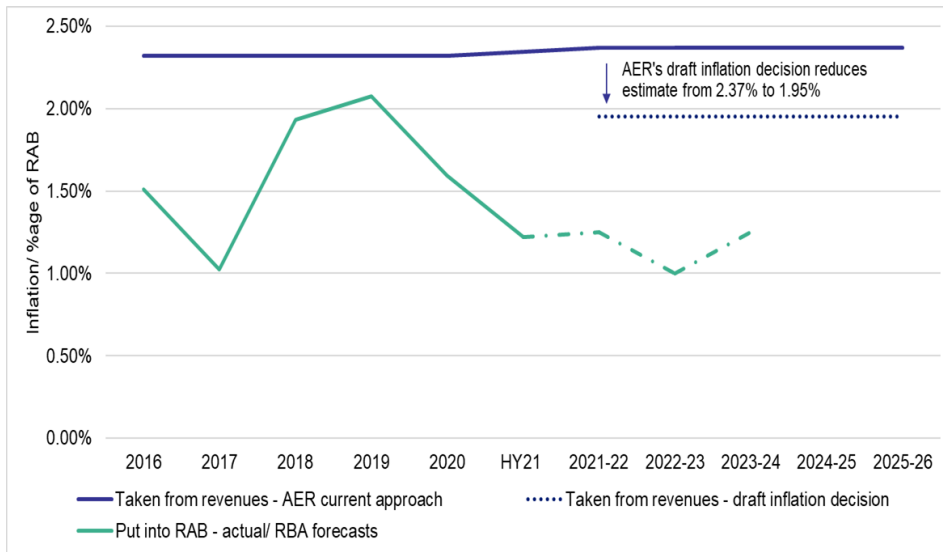
Figure 4: Under-recovery due to actual inflation turning out to be lower than the AER estimate of expected inflation



Source: AER regulatory determinations; RBA inflation figures, all figures in 2020 dollars.

The AER's proposed new approach produces what the AER considers to be an estimate of expected inflation that is superior to the old approach, which has resulted in those windfall losses. It is important to note that even the new approach will over-estimate outturn inflation for each of the next three years according to RBA forecasts, as shown in Figure 6 below.

Figure 5: Deduction from revenues vs. benefit of RAB indexation



Source: 2016-20 PTRMs and RFMs, RBA Statement of Monetary Policy Aug 2020 – year-ended Dec 2020- 2022 CPI forecasts.

In light of the evidence presented above, ENA suggests that there is no basis for any suggestion that the AER’s proposed change could be construed as a ‘windfall gain’ for any network.

5.7 Suggested transition triggers would inevitably be arbitrary or uncertain in their operation

As there is no clear rationale for any delay or transition period, there is no guidance as to how long any delay might be or how any transition would operate.

Consequently, any such delay or transition would inevitably be arbitrary and uncertain, with implications for confidence in the regulatory regime. Rather, a trigger based on a ‘return to normal’ conditions would inevitably see further uncertainty given the unobservability of the central inflationary expectations at issue.

By contrast, confidence in the regulatory regime is supported by taking steps to correct any problematic elements of the regulatory regime when they are identified.

No basis for waiting until the new approach produces an estimate close to 2.5%

There is no rationale for waiting until the new approach produces an estimate close to 2.5%. Confidence in the regulatory regime is not supported by identifying a (mismatch) problem with the current regulatory approach, developing a new approach to address that problem, and waiting until the problem has resolved itself before implementing the corrected approach.

Moreover, it is uncertain when the new approach might produce an estimate that is deemed to be sufficiently close to 2.5%. It may take many years before there is such

an opportunity to implement the approach that the AER considers to be the best estimate that best promotes the NEO and NGO.

No basis for waiting until the RoRI review

There is no rationale for delaying the decision about regulatory inflation until the 2022 RoRI review. Under the ‘take out what you expect to put back’ framework, regulatory inflation is independent of the RoRI process. This is because the term of the inflation estimate is determined by the RFM and not the RORI.

5.8 Now is an ideal time to implement the new approach

Network charges will fall materially even if the new approach is adopted

The Draft Position Paper notes that current regulatory determinations are embedding material reductions in allowed returns due to declines in bond yields to historical lows:

The average estimated nominal rate of return across the five Victorian service providers is 4.05 per cent. Combining this with our estimate of expected inflation using our draft position results in an expected real rate of return of 2.07 per cent, compared to 1.71 per cent using the current approach.

This higher real rate of return results in real prices for distribution network services decreasing by around 12 per cent over the period, compared to 14 per cent using the current method. This difference equates to around \$8 more per annum on a (Victorian) customer's bill than using the current method—holding all else constant.⁵⁹

The correct interpretation of this analysis is as follows:

- » Using the estimate of expected inflation that the AER considers to be the best estimate that best promotes the NEO and NGO (i.e. is in the long run interests of consumers), network charges will be reduced by 12%; and
- » Using a *different* estimate of expected inflation, that the AER considers to be inferior and affected by a ‘mismatch’ problem and which does not best promote the NEO and NGO, would produce different network charges.

The important point here is that, if the AER immediately implements the new approach that it considers to be the best estimate of expected inflation, Victorian electricity network charges will fall materially.

Internal consistency is maintained if the new approach is adopted

The reason why allowed returns (and network charges) are currently being reduced materially is that the prevailing market conditions are characterised by historically and persistently low interest rates and inflation.

An inconsistency and bias would be introduced if:

⁵⁹ Draft Position Paper, p. 67.

- » Allowed returns were lowered to reflect the current low-inflation environment; but
- » The regulatory inflation figure was maintained at a level that does not properly reflect that low inflation environment.

5.9 Potential advantages of a transition

Section 15.2 of the Draft Position Paper sets out the following potential advantages of a transition period, which would have to be weighed up against delaying the implementation of what the AER considers to be the best estimate that best promotes the NEO and NGO:

- » ***It should still result in correct compensation in NPV terms over the life of the assets. In this sense, it should still result in efficient investment.***

ENA disagrees with this view for two reasons.

First, it appears to be based on the notion that allowed revenues would be lower than the AER's best estimate for the forthcoming regulatory period, but that there may be periods of over-compensation in the future that would balance this out in the long run. That is, the AER has stated that it considers its new approach to produce the best estimate and that the new approach is expected to result in higher revenues in the next regulatory period (e.g., for the Victorian distribution businesses). Thus, maintaining the old approach would result in allowed revenues being lower than the AER's best estimate. There is then an implication that this under-compensation will somehow be 'caught up' over the long run. But even supposing that to be the case, there are implications for efficient investment and certainly for efficient utilisation of network assets. As explained in Section 3 above, the incentives for the efficient investment in, and utilisation of, network assets requires that the allowed return should be set in accordance with the AER's best estimate of the efficient cost of capital in every regulatory period – rather than having cycles of over-and under-compensation.

Second, there is no reason to expect that the under-compensation over the next regulatory period (relative to the AER's best estimate of the efficient cost) would ever be caught up. This is because the new approach is expected to be NPV=0 from the time it is implemented.

- » ***It avoids or reduces any potential gains or losses that may occur as a result of an immediate change in methodology. In particular, it would avoid or reduce any potential impact of an immediate change in our upcoming decisions where the new approach is likely to change the present value of revenue over the next regulatory period.***

Section 5.5 explains why the objective of the exercise should not be to achieve NPV neutrality (i.e., waiting until the new approach produces estimates that are

immaterially different from the old approach). Rather, the appropriate objective is to ensure $NPV=0$ (i.e., the regulatory allowance is commensurate with the regulator's best estimate of the efficient forward-looking costs).

The AER has decided that it considers the new approach to produce the best estimate that best promotes the NEO and NGO. Thus, it follows that the old approach produces allowed revenues and prices that do not best promote the NEO and NGO. Consequently, there is no merit in prolonging the old approach.

Every time the AER changes any parameter there is an impact on the present value of revenue over the next regulatory period – the inflation parameter is not unique in that regard. So that is not reason in itself to delay implementation of what the AER considers to be the best estimate. For example, there was no transition or delay when the AER reduced the beta and MRP parameters in its 2013 and 2018 Rate of Return Instruments. Having determined that there was new best estimate, the AER implemented that new estimate immediately.

- » ***Depending on the form of transition, it may allow the change to be deferred to a date where there is no material expected cost to consumers or service providers from the change.***

ENA has noted above that there is no rationale for waiting until the new approach produces an estimate close to 2.5%. Confidence in the regulatory regime is not supported by identifying a (mismatch) problem with the current regulatory approach, developing a new approach to address that problem, and waiting until the problem has resolved itself before implementing the corrected approach.

- » ***It allows us to simultaneously consider the appropriate term for rate of return in the upcoming rate of return instrument process. If we decide to change the term we use in the rate of return, we can change inflation at the same time and avoid any potential ex-ante mismatch.***

This is inconsistent with the AER's view that it is seeking to match what it 'takes out' with what it expects to 'put back.'

Under that framework, the term for the inflation parameter is determined by what the AER expects to 'put back'. Thus, the term for the inflation parameter is determined by the RFM and not any RoRI parameter. It follows that setting the term for the inflation parameter to reflect some attribute of RoRI parameters would *create* an ex ante mismatch.

Also relevant to the above discussion is the proposal that there can be two different approaches that are "capable of achieving" the NEO and NGO:

Over the lives of the RABs, we expect that both an inflation term matching the length of the regulatory period and a 10 year inflation term will deliver

appropriate compensation. That is, if we were to pick one approach and adopt it on an enduring basis, we would expect any imbalances within individual regulatory periods to balance out and deliver appropriate compensation over the longer-term. For this reason, we consider both methods are capable of achieving the NEO and NGO.⁶⁰

It is important to recognise that at any point in time there can only be one *best* estimate and one approach that *best* promotes the NEO and NGO. Our understanding of the above quote is that there may be a second approach that produces outcomes that are sometimes above and sometimes below the revenue allowance from the best approach, and that such an approach might also achieve the NEO and NGO so long as the periods of higher and lower allowances are expected to cancel out in the long run.

ENA disagrees with that view. ENA's view is that the best estimate that best promotes the NEO and NGO should be used. The incentives for efficient investment in, and utilisation of, regulated assets are not promoted by setting a regulatory allowance that is too high in some periods and too low in others.

This is because consumers under this approach will tend to over-consume (relative to efficient utilisation) regulated network services in periods where the regulatory allowance is too low and under-consume when it is too high.

Similarly, there is a strong disincentive for investment during periods where the regulatory allowance is too low. Even if investors accept that the periods of over- and under-compensation will average out in the long run, to the extent they consider the compensation to be too low in the current regulatory period they would (rationally) prefer to wait until the period of under-compensation has ended before making an investment. And symmetrically if investors considered that the current period was one of over-compensation.

In summary, the approach of setting regulatory allowances above the efficient level during some regulatory periods and below it in others does not assist in achieving the NEO and NGO. It does not create the correct incentives for efficient investment in, and utilisation of, regulated assets. ENA's view is that the NEO and NGO is best promoted by setting the regulatory allowance equal to the efficient cost of providing the service in every regulatory period.

⁶⁰ Draft Position Paper, p. 70.

6 Proposed hybrid approach

Summary

- » ENA continues to see merit in the hybrid approach and considers that it has a number of advantages for consumers. The most important of these is that it ensures that all consumers pay the efficient cost of the service that is provided to them.
- » ENA notes that the approach of using expected inflation to index the RAB is supported by analysis by Dr Lally.
- » The hybrid approach proposed by ENA is independent of the method used to estimate expected inflation. Thus, the 5-year glide-path estimate is easily accommodated within the hybrid framework.
- » ENA agrees with the AER that a change to the proposed hybrid approach would require a rule change, which involves a separate process. Such a process would be independent of the method used to estimate expected inflation.
- » ENA seeks clarification on some aspects of the AER's analysis of the proposed hybrid approach to help its members better understand the AER's reasoning on some key issues.
- » ENA agrees with the AER that a change to the proposed hybrid approach would require a rule change, but any such process is independent of the AER's proposed 5-year glide-path estimate of expected inflation. The 5-year glide-path can be implemented immediately.

6.1 Features of ENA's proposed hybrid approach

A straightforward modification – easy to implement

The hybrid approach proposed in the ENA's July 2020 submission involved indexing the RAB using the AER's estimate of expected inflation rather than actual inflation – for the debt component of the RAB only.

Within the context of the AER's proposed approach to regulatory inflation, the hybrid approach would require only one minor change – a different figure would be used when indexing the RAB in the RFM. No other changes would be required. That figure would be obtained by applying 40% weight to actual inflation outcomes and 60% weight to the expected inflation figure that the AER adopted when setting allowed revenues in the PTRM. Thus, implementation of the hybrid approach is straightforward.

Outcomes from the hybrid approach

ENA considers that there are a number of features of the hybrid approach that might be attractive to consumers, including:

- » The hybrid approach has zero impact on prices over the first regulatory period. This is because the only impact of that approach is a potential change to the rate at which the RAB is indexed at the end of the period.
- » The hybrid approach has no impact on long-term average prices or the volatility of prices. This was demonstrated via the simulation modelling submitted with ENA's July 2020 submission. The reason for this outcome is that actual inflation will, on average, equal the AER's estimate of expected inflation so long as that estimate is unbiased. (If the AER's forecast is biased, the hybrid approach has the added benefit of helping to correct that bias.)
- » The hybrid approach ensures that the allowed return matches the AER's estimate of the benchmark efficient cost of providing the service in each regulatory period. Thus, it ensures that consumers will only ever pay the efficient cost of the service that is provided to them.
- » There is no perceptible 'inflation risk' borne by consumers:
 - The hybrid approach has no impact year by year within a regulatory period - because it only affects the figure that is used for the purposes of RAB indexation at the end of each regulatory period.
 - Even if actual inflation turned out to be, say, 0.3% lower than the AER's inflation estimate, the effect on the RAB would be only 0.18% (60% weight). Other things being equal, this would flow through to network charges being 0.18% higher than they would otherwise be. For a typical customer, network charges make up less than one half of the total bill, in which case the effect on the total bill would be less than 0.09%. It seems unlikely that any customer would even notice this impact.
 - But even this overstates the effect because the RAB will differ (relative to the no-hybrid case) according to the *cumulative* differential between actual and expected inflation. If the AER adopts an unbiased approach to forecasting inflation, this cumulative differential will tend to zero over time.
 - Moreover, actual inflation tends to be lower than forecast inflation in circumstances where government bond yields are falling - such as the current market conditions. Thus, in the circumstances in which the hybrid approach would tend to produce higher RAB indexation it is likely that allowed returns will be falling so that the impact of the hybrid approach would be that fall in network charges might be slightly smaller than it would otherwise be.

6.2 The rationale for the proposed hybrid approach

The AER sets the benchmark efficient allowance and networks bear the risk of departing from it

Under the incentive-based regulatory framework, the AER sets what it considers to be a benchmark efficient allowance. Networks are free to try to replicate that allowance or to depart from it. If a network departs from the assumed benchmark efficient approach, that network bears the risk that its actual costs might be above (or below) the regulatory allowance.

In this regard, the AER sets the allowed return on debt on the basis of a trailing average of nominal returns. That is, the regulatory allowance is set on the basis that the AER considers that the benchmark efficient approach is for a firm to issue nominal debt on a staggered maturity basis. The AER could set the allowed return on debt on the basis that the benchmark efficient approach is to issue inflation-indexed debt, or some other approach, but it has not done that.

That is, the AER sets the allowed return on debt to be commensurate with the cost that would be incurred by a firm that issued fixed-rate nominal 10-year BBB+ debt on a staggered maturity basis. Networks are free to mimic that approach in order to match their actual costs to the regulatory allowance. They are also free to depart from that regulatory benchmark but must assume the risk associated with any such departure.

The regulatory allowance should be commensurate with the cost of whatever the AER considers the efficient financing practice to be

The primary rationale for ENA's proposed hybrid approach is that it matches the regulatory allowance with the cost of what the AER considers to be the efficient financing practice.

Networks proposals were not based on networks' actual financing practices nor on what networks believe the efficient financing practice to be. Rather, they are based on the AER's determination of the efficient financing practice.

Whereas the AER can be agnostic about what approach any particular network adopts to raising debt finance, it cannot be agnostic about what approach *it* considers the benchmark efficient firm would adopt – because the AER needs some basis for setting the regulatory allowance.

The AER was clear about this when it first introduced the trailing average allowance for the return on debt. In particular, the AER concluded that the efficient financing practice is to issue fixed rate debt on a staggered maturity basis, and that it would set the regulatory allowance accordingly:

*We need to consider **what would represent efficient debt financing practices of the benchmark efficient entity** under the trailing average portfolio approach...*

In other words, the trailing average portfolio approach allows a service provider—and therefore also the benchmark efficient entity—to manage interest rate risk arising from a potential mismatch between the regulatory return on debt allowance and the expected return on debt of a service provider without exposing itself to substantial refinancing risk.

*Thus, we consider that **holding a (fixed rate) debt portfolio with staggered maturity dates to align its return on debt with the regulatory return on debt allowance is likely to be an efficient debt financing***

*practice of the benchmark efficient entity under the trailing average portfolio approach.*⁶¹

In our July 2020 submission, we proposed that one of the key benefits of the hybrid approach is that it ensured a match between the regulatory allowance and the cost of debt from the approach that the AER considers to be the efficient debt financing approach.

The AER itself has noted the importance of setting the regulatory allowance equal to the benchmark efficient cost:

*Overall, we are satisfied that the chosen specification of the trailing average portfolio approach performs well in terms of **minimising the potential difference between the return on debt allowance and the expected return on debt of the benchmark efficient entity**. Annual updating of the trailing average improves the match between the return on debt allowance and the expected return on debt, as it allows the incorporation of newly revealed market information into the estimate more frequently.*

*To summarise, we are satisfied that the trailing average portfolio approach is likely to contribute to the achievement of the allowed rate of return objective and recognises **'the desirability of minimising any difference between the return on debt and the return on debt of a benchmark efficient entity** referred to in the allowed rate of return objective'.*

*If the expected return on debt (and equity) raised in a period is different from the return on debt (and equity) allowance for the period, this difference may distort intertemporal investment and consumption decisions. That is, it may result in dynamic inefficiency. In particular, **if the return on debt allowance is below the expected return on debt this might result in under-investment. On the other hand, if the return on debt allowance is above the expected return on debt this would lead to over-compensation** for the regulated business and customers paying prices that are above efficient levels.*⁶²

The extraordinary low-inflation environment has highlighted a problem with the AER's current approach

When actual inflation is close to the AER's estimate of expected inflation, there is a close match between the regulatory allowance for the return on debt and the cost of debt under the approach that the AER considers to be efficient.

However, in recent years there has been a consistent divergence between actual inflation and the AER's estimate of expected inflation. This has served to highlight a problem with the current regulatory framework.

⁶¹ AER, December 2013, *Rate of Return Guideline: Final Decision: Explanatory Statement*, pp. 108-109, emphasis added.

⁶² AER, December 2013, *Rate of Return Guideline: Final Decision: Explanatory Statement*, p. 109, emphasis added.

In particular, the regulatory allowance is equal to:

- » The cost of debt under the approach that the AER considers to be efficient; plus
- » A random amount that depends on the extent to which actual inflation turns out to be different from the AER's estimate.

This outcome would seem to violate the principle of matching the regulatory allowance to the AER's estimate of the benchmark efficient cost.

Although the AER's proposed changes do go some way towards reducing the gap between the regulatory inflation figure and future outturn inflation, the mismatch between the regulatory allowance and the benchmark efficient cost will remain. ENA's proposed hybrid approach eliminates that mismatch.

6.3 Acceptance of the logic of the hybrid approach

Major Energy Users

In its submission to the AER, MEU identified the problem that forms the basis for the proposed hybrid approach – a mismatch between the regulatory allowance (based on actual inflation) and the cost of nominal debt (which reflects expected inflation):⁶³

*The MEU considers that if the current forecasting of inflation does not deliver an outcome that removes the risk from networks for the difference between forecast inflation and actual within each regulatory period (Including the first year), then it needs to be changed.*⁶⁴

MEU propose that some form of ex post true-up to match the regulatory allowance to the efficient cost is required. ENA notes that this is economically equivalent to the RAB indexation that would occur under the proposed hybrid approach. Importantly, MEU frames this in terms of benefits to consumers:

*There is a clear benefit to consumers to carry out an ex post adjustment to correct the network allowance to reflect the change from forecast inflation to actual inflation, rather than leaving any residual risk to the networks to manage. In fact, there may be a detriment to consumers if such an ex post adjustment is not made, especially if the inflation forecast is lower than the actual inflation, as there is the potential that investors might not consider the headline return on equity too low to warrant future investment and so increase consumer risk.*⁶⁵

⁶³ Major Energy Users Inc., 27 July 2020, *Submission to AER on Regulatory Treatment of Inflation*.

⁶⁴ MEU (July 2020), p. 5.

⁶⁵ MEU (July 2020), p. 8.

Dr Lally

Dr Lally has expressed support for the approach of indexing the RAB using expected rather than actual inflation in a report for the New Zealand Commerce Commission:⁶⁶

Vector (2016, paras 35-50) favours inflation adjustments using the expected inflation rate throughout the process rather than a mix of forecast and actual inflation. This has three advantages: it removes the bankruptcy risk to businesses arising from actual inflation being less than forecast inflation, it eliminates any violations of the NPV = 0 principle due to regulators' errors in estimating expected inflation, and it reduces the effort that needs to be devoted to correctly estimating the expected inflation rate because errors in doing so no longer induce violations of the NPV = 0 principle.⁶⁷

One of the key advantages that Dr Lally identifies is the reduction in the risk of credit rating downgrades and other impairments in the ability to raise capital resulting from under-compensation in circumstances where the regulatory allowance is less than the cost of nominal debt. Dr Lally uses the term “bankruptcy risk” to describe this point.

We note that Dr Lally has recommended that all of the RAB should be indexed using expected rather than actual inflation. This goes beyond the ENA proposal whereby a 60/40 weighted average of expected and actual outturn inflation would be used. Both variations are equally straightforward and both have the benefit of matching the regulatory allowance to the nominal cost of debt.

6.4 Clarification of AER views

Clarifications sought in Final Position Paper

ENA considers that stakeholders would benefit from a better understanding of the AER's reasoning in relation to the proposed hybrid approach. ENA encourage the AER to provide, in its Final Position Paper, some discussion to clarify the following issues:

The framework for setting regulatory allowances

- » Stakeholders would benefit from a clarification of the AER's views about the efficient financing practice of the benchmark efficient firm:
 - It would be useful for stakeholders to understand whether the AER still holds the view that the “efficient financing practice of the benchmark efficient entity” is “holding a (fixed rate) debt portfolio with staggered maturity dates to align its return on debt with the regulatory return on debt allowance.”⁶⁸

⁶⁶ Lally, M., 23 November 2016, *Review of further WACC submissions*, Report for New Zealand Commerce Commission.

⁶⁷ Lally (2016), p. 22.

⁶⁸ AER, December 2013, *Rate of Return Guideline: Final Decision: Explanatory Statement*, pp. 108-109, emphasis added.

- Does the AER still consider that matching the regulatory allowance to the cost of debt incurred by the efficient financing practice brings benefits in terms of dynamic efficiency and creating the correct incentives for investment and consumption?⁶⁹
- Does the AER consider the return on debt allowance should be based on a debt management strategy that a network would be able to implement in practice?
- » Does the AER consider the regulatory allowance should be set to reflect the AER's estimate of the benchmark efficient costs in every regulatory period?:
 - » Once the AER has determined the efficient costs that would be incurred by the benchmark firm, should the regulatory allowance be set accordingly?
 - » Or is it acceptable for the regulatory allowance to be set above the efficient costs in some regulatory periods and below the efficient costs in other regulatory periods, so long as the mismatch is expected to average out over the long run?

Evaluation of the ENA hybrid proposal

- » ENA considers the proposed approach to be straightforward to implement. The RAB would be indexed using a 60/40 weighted-average of expected and actual inflation. No other changes to the regulatory framework would be required. Stakeholders would benefit from clarification about the AER's concerns about the complexity of this approach.
- » The Draft Position Paper notes that the hybrid approach proposed by ENA has not been adopted by other regulators. Stakeholders would benefit from clarification about the weight that the AER has afforded to this point in its decision-making and about the relevance of this point to the NEO and NGO.
- » The Draft Position Paper responds to networks' use of nominal debt as follows:

In response to service providers issuing debt in nominal terms, we consider that there is correct compensation in NPV terms for their cost of debt and equity under the current 'real return' approach flowing from the interaction of nominal rate of return with the PTRM and RFM. Our draft position is that the way service provider issue debt or equity does not alter this NPV calculation.⁷⁰

Stakeholders would benefit from clarification about whether the AER considers that there is correct compensation in every regulatory period, or whether there is correct compensation in NPV terms over the life of an investment, and whether the distinction matters.

⁶⁹ AER, December 2013, *Rate of Return Guideline: Final Decision: Explanatory Statement*, p. 109, emphasis added.

⁷⁰ Draft Position Paper, p. 130.

Stakeholders would also benefit from clarification about how the AER determines whether its return on debt allowance provides “correct compensation.”

- » The Draft Position Paper identifies the AER’s concern that the proposed hybrid approach may create a risk for consumers:

Additional inflation risk will be placed on consumers who may see their prices vary by more in real terms.

Assuming that consumers do have a preference for maintaining prices in real terms within each regulatory period, the impact of the proposed hybrid approach would be imperceptible. Section 6.1 above demonstrates that even a 30 basis point difference between expected and actual inflation would result in a price impact of less than 0.09% for consumers.

Stakeholders would benefit from understanding the extent to which the AER considers that this is a material consideration.

- » The ENA submission included modelling of the proposed hybrid approach. That modelling indicated that the proposed approach has no perceptible impact on average prices or volatility. It is NPV equivalent to the current approach.
 - Stakeholders would benefit from clarification about whether the AER considers there are any errors in those calculations, or is of the view suggested by the modelling that average prices or volatility are not material considerations.

No delay to immediate implementation of the 5-year glide-path

ENA agrees with the AER that a change to the proposed hybrid approach would require a rule change, which involves a separate process. That whole process is independent of the AER’s proposed 5-year glide-path estimate of expected inflation – that same estimate would be used whether or not a hybrid approach was adopted when indexing the RAB. Consequently, the 5-year glide-path estimate can be implemented immediately – independent of any consideration of the hybrid approach.

7 Emerging financeability pressures and negative profit allowances

Summary

- » ENA and member firms have raised concerns about the fact that recent regulatory decisions produce negative net profit after tax (NPAT) in every year of the regulatory period.
- » In a report for the AER, Sapere also raised this concern, noting that it might indicate an “underlying inconsistency” that “would not be consistent with the efficient investment and efficient operation of an NSP.”
- » The negative net profit allowance is a real and important issue for network businesses. Negative net profits affect credit rating metrics, ratios used in debt covenants, and have real effects on the ability to attract capital.
- » These issues have the potential for critical consumer impacts, through potential increases in cost of debt arising from sustained unfinanceable conditions, and distorted investment and utilisation signals for networks and customers
- » Since this issue has not been fully addressed as part of the regulatory inflation process, ENA is keen for early and full engagement on this very important issue as part of the financeability process leading up to the 2022 RoRI.

7.1 Recent regulatory allowances place networks in a loss-making position

Recent decisions from the AER place benchmark regulated networks in a loss-making position. The combination of the AER’s current allowed return on equity and its estimate of expected inflation are such that:

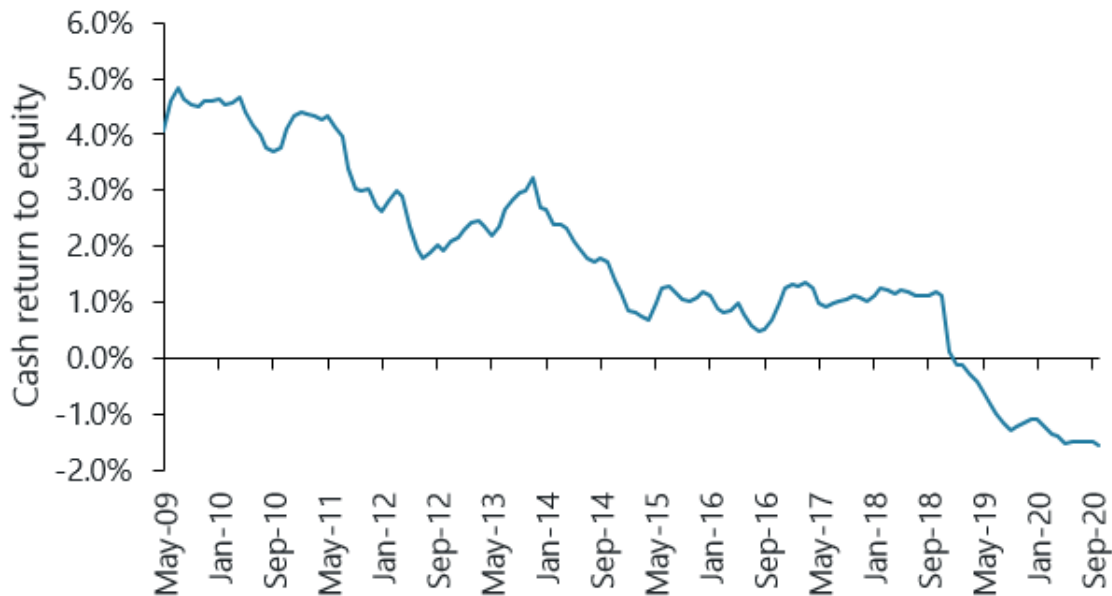
- » SAPN is scheduled to incur losses in every year of its current regulatory period, amounting to \$135 million in total;
- » Energy Queensland’s networks are scheduled to incur losses in every year of its current regulatory period, amounting to \$510 million in total; and
- » The NSW distribution business have also been placed into loss-making positions in their most recent determinations.

This is a new development in the Australian regulatory setting, with the problem first arising in the NSW distribution network decisions in 2019. The problem has persisted in all subsequent decisions and continues to apply to the Victorian distribution draft decisions, even after the AER’s proposed modification to its approach for estimating expected inflation.

Figure 7 illustrates this phenomenon by showing the significant recent movements to a negative allowed cash return on equity under the AER’s currently applied approaches.

It can be seen that since 2018 the combination of significant reductions in regulatory returns on capital from the 2018 Rate of Return Instrument, combined with historically low Commonwealth bond rates have moved cash returns sharply negative in a manner never previously experienced.

Figure 7: AER Allowed Cash Return on Equity⁷¹



On the issue of regulatory allowances being set such that networks incur a loss in each regulatory year, Sapere have advised the AER that:

*...we note that the **sustained fall in inflation expectations** mean that the parameter estimates determined recently by the AER imply a negative cashflow return on equity for a benchmark efficient entity. An assumption that the benchmark efficient entity would fund dividends (and growth) from depreciation cashflows—that is, spending less on replacement of real capital—**would not be consistent with the efficient investment and efficient operation of an NSP**, at least beyond the short-term. Borrowing to pay dividends may be justified by the higher increase in the RAB (than would be expected with a positive cash rate of return on equity) and consequential increase in revenue, though may alter the cash payment profile for consumers.*

*We suggest that the AER consider, during its 2020 Inflation Review, whether a projected negative cash return on equity might indicate **an underlying inconsistency** in one or more inputs into its estimate of WACC and expected inflation.⁷²*

⁷¹ Figure 7 is derived by taking the AER's allowed nominal return on equity each month (computed as the prevailing 10-year government bond yield + allowed beta x allowed MRP) minus 2.5 times expected inflation (calculated using the AER's 10-year geometric average method).

⁷² Sapere report, paragraphs 10-11, emphasis added.

Similarly, Lally has advised the AER that the cause of the negative profit allowance is the AER's adoption of an expected inflation figure that is "too high":

*QTC (2019) goes on to present estimates of NPAT for Ergon Energy and Energex over the 2021-2025 period, which are negative for both firms for all years. These estimates are all based on the AER's estimate for expected inflation over the next ten years of 2.45%. As argued in section 2 above, the appropriate estimates for expected inflation should be specific to each year and, in the presence of RBA forecasts over the next two years that are significantly below the Target, **the AER's estimate is too high for each of these years** examined by the QTC.⁷³*

ENA has previously submitted that there is a real issue here that requires careful consideration by the AER. The setting of regulatory allowances that put networks into a loss-making position is a new development with important consequences for networks and consumers.

These developments have the potential for critical consumer impacts, through potential increases in the future cost of debt arising from sustained unfinanceable conditions, and distorted investment and utilisation signals for networks and customers. A regulatory framework which delivers short-term price reductions with the consequence of placing the benchmark efficient entity at avoidable risk of being unable to efficiently finance network capital expenditure and debt at low cost is not one which is consistent with the long-term interests of customers.

In addition, as identified in Section 3 and the policy considerations underpinning the framework, such outcomes would be likely to distort both customers and networks investment signals, and lead to distorted utilisation of network services and assets in a manner which would undermine current and future customers capacity to access grid services.

It is clearly not consistent with one of the key objectives of the regulatory regime that networks be given a reasonable opportunity to recover their efficient costs, nor is putting networks in such a position in the long-term interests of consumers. This issue has been raised by networks and the AER's own consultants and has great practical importance for networks and for current and future consumers.

7.2 Consideration in the Draft Position Paper

The Draft Position Paper provides three responses to this point, each of which are summarised below.

The first point made by the Draft Position Paper is that negative cash returns "are not considered an issue" because those losses will be offset by expected increases in future RAB values:

⁷³ Lally report, p. 31, emphasis added.

*We note that negative cash returns for equity are not considered an issue in NPV terms over the life of the assets due to the offsetting expected increases in RAB values.*⁷⁴

The second point made by the Draft Position Paper is that Google, and some other companies, have not yet paid a dividend:

*There are numerous companies that have never paid cash dividends but are valued by investors because of their capital accumulation (such as Alphabet Inc., which owns Google).*⁷⁵

The third point made by the Draft Position Paper is that Sapere recommended that the AER continue using its current approach:

*We also note that while Sapere recommended that we consider this issue it also recommended that we continue using our current approach.*⁷⁶

The Draft Decision Paper does not substantively consider these issues at length, highlighting the need for future focus in the Pathways to 2022 process of this critical issue.

7.3 ENA responses

Response to the proposition that negative profit allowances are not an issue

The suggestion that a negative profit allowance may not be an issue because those losses will be offset by expected increases in future RAB values overlooks the practical importance of reported profits. If this issue should persist for one more regulatory period, the regulatory allowance would result in the benchmark firm recording losses in ten consecutive years.

In practice, for any business that records losses for ten consecutive years there will be ramifications in terms of credit ratings and the ability to attract investment. These are real practical effects that cannot be assumed away or dismissed.

Moreover, the negative cash return allowances have to be 'plugged' by cash from some other source. The potential sources of cash, and their role in offsetting the losses that are embedded into the benchmark regulatory allowance, are as follows:

» Depreciation allowances

It is not sustainable for a network to be diverting its depreciation allowance to offset a negative allowed cash return to equity. If maintained, that approach would inevitably result in a network that deteriorated over time as funds that would otherwise be used to maintain the quality of the network are diverted to offset the losses that result from the regulatory allowance.

⁷⁴ Draft Position Paper, p. 89.

⁷⁵ Draft Position Paper, p. 88.

⁷⁶ Draft Position Paper, p. 89.

» **Borrowing against an assumed increase in the value of the RAB**

The AER's models assume that the RAB will increase in line with the AER's estimate of expected inflation and that the network will be able to borrow 60% of that assumed increase. However, there are three problems with this solution:

- » For the last decade, the RBA has over-forecast inflation as illustrated in Figure 1 above. Consequently, even under the AER's proposed new approach the actual RAB growth has fallen short of expectations.
- » In any event, borrowing against the assumed increase in the RAB has no effect on net profit. That additional borrowing is not revenue – it is a liability that must be repaid (with interest) by future consumers. That is, it is simply a transfer of cash from future consumers to current consumers. It is not a source of revenue that helps to offset a negative profit allowance, credit metrics or ratios that form the basis of debt covenants.
- » Companies are only able to pay distributions out of retained profits. It is not sustainable to continue to allow negative profits and to seek to use cash raised by borrowing against an assumed increase in asset values to pay distributions.

» **Incentive payments**

The allowed return should not be set below the efficient financing costs, such that incentive payments might make up the difference. Rather the allowed return should be commensurate with the efficient financing costs of a benchmark efficient entity. The AER has indicated that its 2018 Instrument is consistent with that objective,⁷⁷ in which case there should be no shortfall that might be made up via incentive payments.

Moreover, it is not sustainable for networks to have to rely on outperforming efficient benchmarks to offset negative profit allowances. When networks outperform a benchmark, that benchmark is revised in accordance with incentive-based regulation. With each iteration it becomes more difficult to outperform the benchmark.

» **Income from unregulated assets**

In line with the analysis of incentive payments above, allowed returns should not be set below the efficient financing costs, such that income from unregulated assets might make up the difference.

In the absence of some other source of cash, the negative cash allowance will have to be plugged by an injection of equity capital. This amounts, in effect, to shareholders making a payment to current consumers in the hope that it might be recovered later from future consumers.

⁷⁷ AER, December 2018, Final Rate of Return Instrument: Explanatory Statement, p. 29.

Response to the Google example

The Google example is not relevant to negative NPAT allowances in utility regulation. Moreover, Google is not a good example of a firm with negative NPAT. Google's financial year 2019 NPAT was USD +\$34.3 billion.

Response to the proposition that Sapere has endorsed the AER's current approach

The Draft Position Paper refers to p. 30 of the Sapere Report. However, nowhere does Sapere conclude that the AER should maintain its current approach of providing negative cash returns such that the benchmark firm incurs a negative net profit in every regulatory year.

Rather, on the page that the Draft Position Paper cites, Sapere states:

Stakeholders have correctly identified that the current regulatory approach may result in negative cash returns to equity; negative cash returns to equity may occur with a low allowed nominal rate of return on equity and/or high leverage. If, in addition, outturn inflation is low relative to expected inflation, then the return on equity may in amount be insufficient to meet the obligation to pay interest...we note that the sustained fall in inflation expectations means that the parameter estimates determined recently by the AER imply a negative cashflow return on equity for a benchmark efficient entity. We suggest that the AER consider, during its 2020 Inflation Review, whether a projected negative cash return on equity might indicate an underlying inconsistency in one or more inputs into its estimate of WACC and expected inflation.

That is, Sapere are clear about the fact that they consider this to be an issue of importance that requires full consideration from the AER.

ENA submits that the AER should perform the investigation into this issue that Sapere have advocated in a collaborative manner with key review stakeholders.

7.4 The need for proper consideration of this important issue

ENA is keen for early and fuller engagement on this very important issue that has been raised by networks and the AER's own consultants.

We look forward to this issue being a key focus of the AER's process in relation to financeability and the current low-return environment as part of the Working Paper series leading up to the 2022 RoRI.

8 Next steps

ENA suggests that there are two important next steps for the AER and stakeholders to consider.

8.1 Clarification of reasoning in relation to the hybrid approach

It is an important part of the regulatory process for stakeholders to have a thorough understanding of the AER's reasoning in relation to key issues. Section 6.4 of this submission identifies some areas where stakeholders would benefit from further clarification of the AER's reasoning in the Final Position Paper.

8.2 Negative profit allowances and financeability work

The negative net profit allowance is a real and important issue for network businesses. Negative net profits affect credit rating metrics, ratios used in debt covenants, and have real effects on the ability to attract capital. This issue has been raised by networks and the AER's advisers.

It is important that the 'financeability' process begin at the earliest opportunity. ENA proposes that this process could begin, through the Pathway to 2022 process, with materials that:

- » Documents the issue and drivers of a negative net profit allowance for the benchmark firm;
- » Explores the real practical consequences for credit rating and loan covenant metrics that networks are currently grappling with; and
- » Outlines potential causes and approaches adopted internationally.

9 Response to AER questions

The Draft Position Paper seeks stakeholder views on a number of issues. We set out ENA's views on each of those matters below:

» **Potential implications of the proposed change, particularly for consumers.**

ENA supports the proposed change to a 5-year glidepath estimate and considers that this approach should be implemented immediately. Our reasons for this conclusion are set out in Section 3.

In relation to the implications for consumers, ENA's view is that the long-term interests of consumers are best promoted by implementing the approach that the AER considers to be the best estimate that best promotes the NEO and NGO.

For the reasons set out in Section 3, ENA's view is that the NEO and NGO and RPP must guide the approach to setting regulatory inflation. That framework requires the AER to adopt what it considers to be the best estimate that best promotes the NEO and NGO. Extraneous social objectives have no role to play when setting the allowed return. That is not to say that such social objectives are unimportant, but rather that they are "better dealt with in other legislative instruments and policies which sit outside the National Electricity Law."⁷⁸

In any event, ENA notes that using the estimate of expected inflation that the AER considers to be the best estimate that best promotes the NEO and NGO, network charges will be reduced by 12% for the Victorian distributors as per the AER's 2021-26 draft decision.

» **Delay or transition to the implementation of the AER's proposed new approach**

ENA considers that the new approach should be implemented immediately. There is no merit in prolonging the use of an approach that the AER considers to be inferior. Rather the approach that the AER considers to produce the best estimate that best promotes the NEO and NGO should be implemented immediately. We explain our views on this point in more detail in Section 5.

» **Form of glide-path**

ENA has set out a possible variation of the glide-path approach in Section 4.4 in this submission. This proposal illustrates how market data could be used to inform the glide-path.

» **Defining the form of inflation forecast to be used from the RBA Statement of Monetary Policy**

⁷⁸ Hansard, p. 885.

ENA considers that there is no need to make any change to the AER's current approach. ENA considers that there is some benefit in maintaining regulatory discretion. The very material impact on inflation figures caused by the government response to COVID was entirely unpredictable. This episode illustrates the benefits of maintaining regulatory discretion.

» **Text to update PTRM**

ENA has no objections to the proposed text for describing the process for computing the expected inflation figure to be used in the PTRM.